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ABSTRACT

The purpose of this study was to assess the merit of using personal income in the determination of a school district's fiscal capacity for the apportionment of New York state aid. Both personal income and full valuation of real property suffer from technical weaknesses, but improvements in the data are possible if the state is willing to underwrite the cost. Calculations replacing full value of real property with 1970 personal income data produced several changes in state aid allocation. The state's five poorest districts, five big cities, and other central cities would experience a drop in formula aid. Conversely, the five wealthiest school districts with pupil populations over 500 and the suburban areas would receive less aid. If 1976 New York State taxable income is used instead of 1976 full valuation as the wealth measure, similar shifts occur. Because of limitations with the census data, findings are suggestive, not definitive. Personal income will not be acceptable as a total substitute for full valuation as the measure of a school district's wealth. Before personal income is used in a composite wealth index for the apportionment of aid, viable combinations need to be examined within several alternative formula options. (Author/JM)

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MEASURING THE WEALTH OF SCHOOL DISTRICTS FOR THE APPORTIONMENT OF AID TO PUBLIC SCHOOLS IN NEW YORK STATE:

FULL VALUATION VS. PERSONAL INCOME

The 1977 New York State personal income tax returns, for the first time, required all State residents to indicate the school district in which they reside. The purpose of this report is to examine the types of personal income data which are now available within the State and to analyze the shifts in aid which may occur if personal income is used to judge school district wealth in a State operating aid formula.

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AUGUST 1978

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FOREWORD

In December 1974 New York State's Governor-elect Hugh L. Carey appointed a 30-member Task Force on Aid to Education to help his new administration develop a comprehensive plan of reform for the State's school finance system. The recommendations of the Task Force were contained in a two volume report released in April 1975.[1]

Acting on the report, the Governor established a small study group within the New York State Budget Division to coordinate an interagency effort to improve school finance methods. Beginning in August 1975, with a grant from the Ford Foundation, this group initiated a series of studies designed to accelerate local property tax administrative reform and to develop criteria for a new state operating aid formula. To help support this effort, additional outside funding was sought.

The current study examines full value and income as alternative measures of school district wealth for the apportionment of state aid and is a continuation of studies initiated earlier pursuant to the Ford Foundation grant. Funds to support the study were obtained from a grant made to the New York State Education Department by the United States Department of Health, Education and Welfare pursuant to Section 842 (a)(1), Part D, Title VIII of the Education Amendments of 1974, Public Law 93-380. Section 842 reimburses states for costs incurred in the development and/or administration of a plan for equalization of state and local finance programs.

A preliminary staff analysis on the role and nature of school district relative wealth, prepared in 1977 by a special study group at the New York State Board of Equalization and Assessment, examined alternative ways of judging the relative wealth of school districts in New York State and their effect on the overall distribution of wealth among school districts. The present study is an extension of the earlier staff analysis.

Taxable personal income data by school district were not available for the current study.

Chapter 309 of the Laws of 1977 required New York State taxpayers, for the first time, to record their school district of residence on their income tax forms. When final data from the 1977 tax returns become available, further analysis will be undertaken. Because New York State taxpayers may obtain extensions for filing of 1977 returns lasting until December 1978, the New York State Budget Division does not expect to receive a final report on the 1977 returns from the State Department of Taxation and Finance prior to February 1979.

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[1] State of New York Task Force on Aid to Education. Report to Governor Hugh L. Carey, Volume I: School Finance. Volume II: Special Education, State Governance, New York City Governance, Early Childhood Education. April 1975.

The purpose of this study is to facilitate analysis of the 1977 New York State income tax data when they become available, because of the interest expressed in their possible use. For example, the Regents made the following statement in October 1977:

> "We welcome the actions of the 1977 Legislature that will make it possible to obtain personal income data on school districts. We propose an intensive study of such data as soon as it becomes available. This will be for the purpose of studying the possible use of such data in the aid formula in the future."[2]

Funds from the Ford Foundation and Federal Section 842 grants were used by the State Budget Division to help finance this report. Data for its preparation were provided by the New York State Education Department, the State Department of Taxation and Finance, and the State Board of Equalization and Assessment.

Staff members employed by the State Budget Division's Education Unit assisting in the preparation of this report include Christine A. Dascher, Program Assistant; Nancy A. Hoddick, Consultant; John Kaelin, Graduate Student Assistant; James E. Shea, Deputy Assistant for Education; and Lois J. Wilson, Special Assistant for Education. Secretarial support was provided by Antonia Bogardus and Catherine McElroy.

August 1978

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[2] Regents of the University of the State of New York. State Aid Recommendations to the 1978 Legislature. Adopted by the Regents. October 1977.

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INTRODUCTION

THE NATURE OF THE PROBLEM

It is public policy in New York State to distribute state aid to public school districts in inverse proportion to school district wealth and in direct proportion to need. To this end, school finance formulas have been devised for apportioning aid to each of the State's 705 major school districts.[1] Since the introduction of equalization aid formulas approximately 50 years ago, the standard measure of school district wealth in New York State has been real property full valuation per pupil.

Determination of the full value of real property in each of the State's 991 assessment units is a complex process. Parcels of property in each assessment unit are assessed annually at the local level, and State equalization rates are established based on market surveys. Variations in assessment practices, technical problems with the equalization rate measures, and rapid changes in the market value of many properties have led to inequalities and to growing dissatisfaction with full value as the measure of wealth. As a result, increased attention has been given to personal income as an alternative measure of fiscal capacity.

The purpose of this study is to assess the merit of using personal income in the determination of a school district's fiscal capacity for the apportionment of State aid. This study might not have been undertaken if legislation had not been enacted to require the collection of personal income data by school district. Under this legislation (Chapter 309 of the New York State Laws of 1977) all New York State residents filing a personal income tax return for 1977 and thereafter were requested to specify the school district in which they reside. The interest in personal income as a measure of school district wealth warrants analysis of the 1977 taxable personal income data as they become available.

Since personal income data will be available for use as a criterion in the apportionment of public school aid in future years, it is important to determine the characteristics of the districts which might receive additional aid if personal income were to be used as the wealth measure in the operating aid formula. If U.S. Census Bureau personal income data had been used in the operating aid formula which will distribute a total of $2.5 billion to New York State public school districts during the 1978-79 school year, what shifts in aid would have occurred?

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[1] Under New York State law, a major school district is defined as an operating district with eight or more teachers.

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THE MEASUREMENT OF SCHOOL DISTRICT WEALTH

During the 1978-79 school year, New York State school districts will receive nearly $3.4 billion in state aid. In the allocation of approximately $3 billion, or about 88 percent of the total, the school district's relative wealth per pupil will be a component of the formula which determines aid payments to 705 major school districts.

Wealth per pupil, as the term is used in New York State aid formulas, consists of two different quantities. The numerator in the wealth per pupil measure is full valuation of real property located within the school district. The denominator is a "weighted count" of public school pupils residing within the local school district.

The Numerator

Existing Law. For a number of years, New York State public school aid formulas have used full valuation as the numerator in all wealth per pupil measures. Full valuation is determined for each district by dividing the total value of the assessment roll for each of the district's assessment units by the appropriate state equalization rate. Equalization rates are established for each of 991 assessing units by the State Board of Equalization and Assessment on the basis of market value surveys. These surveys are generally conducted on a biennial schedule (i.e., once every 2 years).

The total statewide value of the real property on which pupil school aid payments will be based in the 1978-79 school year is estimated to be $204 billion.

Alternatives. Other states use a variety of measures to determine the relative wealth of their school districts. Alabama, for example, constructs an index of fiscal ability which includes sales tax revenues, auto license fees, personal income tax revenues, the value added by manufacturing, and the value of farm income. Virginia also has a multi-factor index. Florida uses property valuation per full-time equivalent pupil, but the State then adjusts aid payments based on a cost-of-living index.

Combinations of income and property valuation data for the determination of relative wealth seem to be increasing in popularity. Pennsylvania's current wealth measure is 60 percent dependent upon property valuation per pupil and 40 percent dependent upon personal income per pupil. Connecticut employs property valuation per capita modified by the ratio of a town's 1969 median family income to the state average. Rhode Island has a similar measure -- equalized property valuation per pupil modified by a median family income ratio. Kansas measures wealth with a four-year average of adjusted property valuation and resident taxable income in the district. Maryland also uses a combination of property valuation and taxable income per pupil to apportion state aid to school districts.[2]

Theoretically, many possibilities are available for use in New York State. However, in the short term, there are only a limited number of wealth numerator alternatives for which data are currently available by school district.

Measures Selected for Study. Before New York State officials try to construct a viable composite index based on both full valuation and personal income data, it is important to know the nature of the dollar shifts which will result if personal income is used as a component of the wealth measure. Within this State, personal income data has twice been collected, by school district, during the past decade.

- -- The U.S. Bureau of the Census collected such data for the 1969 calendar year as part of the 1970 census.
- -- The New York State Department of Taxation and Finance 1977 State income returns, for the first time, require taxpayers to indicate the school district in which they reside. A final report on 1977 taxable income, by school district, is anticipated early in 1979.

The 1970 Census income data is from a special survey commissioned by the State Education Department, and the survey does not contain income data for six of the state's major school districts. Moreover, the 1969 survey had certain statistical weaknesses, and the data are generally presumed not to be accurate enough for use in a New York State public school aid formula. As a result, the findings reported in the present study are suggestive rather than definitive.

The New York State Department of Taxation and Finance income data by school district are currently of great interest to New Yorkers concerned with school finance reform. When final data from the 1977 tax returns are available, the current study will be repeated using New York State adjusted gross income per wealth total aidable pupil unit.

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[2] Education Commission of the States, School Finance at a Third Glance. January 1978.

The Denominators

Beginning with the 1978-79 school year, New York State will, for the first time, use two different per pupil wealth measures for each major school district. They are:

> Full Value per Resident Pupil in Weighted Average Daily Attendance (FV/RWADA). Since 1956-57 this measure has been used in all formulas for the apportionment of aid. Beginning with the 1978-79 school year, FV/RWADA will be used only for the apportionment of building, BOCES, special services for occupational educational programs, and learning disabled aids.
>
> Full Value per Wealth Total Aidable Pupil Unit (WTAPU). This measure will be used for the first time (1978-79) for the apportionment of operating aid, high tax aid, and excess cost aid for the severely handicapped.[3]

The full valuation data used in both measures will be identical. However, the pupil counts will differ. In the new measure (FV/WTAPU), the weightings used to establish per pupil wealth are similar to those used since 1974-75 when the concept of total aidable pupil units was first introduced.

The differences between resident pupils in weighted average daily attendance (RWADA) and wealth total aidable pupil units (WTAPU) are significant, as Table 1 indicates. For example, in the calculation of RWADA local school districts have a choice of the highest attendance periods (4 of 8 or 5 of 10); no choice is available in the calculation of WTAPU. Thus, the resident ADA[4] count for RWADA is always higher than the resident ADA count for WTAPU.

The second major difference, in addition to the resident ADA base, is the variation in the weightings applied to each pupil. In calculating WTAPU, pupils with special educational needs [determined by district scores on a statewide Pupil Evaluation Program (PEP) test] and those with handicapping conditions count more than other pupils at the same grade level. In the calculation of RWADA, the sole basis for weighting pupil attendance is grade level.

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[3] Both houses of the Legislature had enacted different excess cost aid measures as of June 23, 1978. However, since both bills (Assembly 12526 and Senate 10371) use FV/WTAPU, it is assumed that this formula factor is not controversial.

[4] Average Daily Attendance for pupils residing in the district (Resident ADA).

TABLE 1

PUPIL WEIGHTINGS APPLIED TO RESIDENT AVERAGE DAILY ATTENDANCE BASES IN COMPUTATION OF WEALTH PUPIL NUMERATORS FOR PUBLIC SCHOOL AID APPORTIONMENT, 1978-79 SCHOOL YEAR

	Denominators for Wealth Measures	
Type of Weighting	Wealth TAPU: Computed on Basis of Actual Attendance Average[a]	Resident WADA: Computed from Best Attendance Periods[b]
Basic Units of Attendance		
Half Day Kindergarten	.50	.50
Full Day Kindergarten	1.00	1.00
Secondary (Grades 7-12)	1.00	1.25
Additional Weightings[c]		
Handicapped	1.00	--
PSEN[d]	.25	--
Secondary		
Handicapped	.00	--
PSEN	.15	--
Other Secondary[e]	.25	--

* * * * * * * * * * * * * * * *

Number of Pupils	------Thousands-----	
New York City	1,036	994
Rest of State	2,370	2,314
Total	3,406	3,308

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[a] Wealth total aidable pupil units (Wealth TAPU) for the 1976-77 school year will be the basis of 1978-79 aid apportionment. It is calculated using a district's actual average daily attendance for resident pupils without opportunity for selection of the highest attendance periods.

[b] Resident pupils in weighted average daily attendance (Resident WADA) for the 1976-77 school year will be used for 1978-79 aid apportionment. In calculating RWADA, a district's resident average daily attendance, based on the highest 4 of 8 or 5 of 10 attendance periods, is used.

[c] Additional weightings are added to the basic units of attendance in the WTAPU pupil count. There are no additional weightings in the RWADA pupil count.

[d] All pupils with special educational needs (PSEN) are entitled to an additional weighting of 0.25. Secondary PSEN receive a further 0.15 additional weighting, for an overall additional weighting of 0.40 and a total weighting of 1.40.

[e] The other secondary weighting of 0.25 is only available for secondary pupils not previously weighted as PSEN or handicapped pupils.

In the computation of RWADA, all pupils in grades 7 to 12 are counted one and a quarter times -- i.e., they are weighted 1.25. In contrast full-time elementary pupils (Grades K-6) are counted once -- i.e., each such pupil is weighted 1.00.

In the WTAPU measure, the weightings make it possible for several different types of full-time pupils to be counted more than once in the determination of wealth pupil units. For example, handicapped elementary pupils with special educational needs (PSEN) are given a total weight of 2.25; handicapped secondary school PSEN, 2.40; other handicapped pupils, 2.00; nonhandicapped secondary PSEN, 1.40; nonhandicapped elementary PSEN, 1.25; and secondary pupils not previously weighted as PSEN or handicapped pupils, 1.25.

Alternatives. Recently within New York State, there has been substantial interest in revising the denominator of the wealth per pupil measure for the apportionment of school aid. Since the 1974 legislative session, a variety of different wealth per pupil denominators have been considered. Many of the alternatives have used a combination of resident average daily attendance and resident average daily membership. A public school and nonpublic school enrollment composite has also been proposed. Moreover, different pupil weightings have been suggested for several of these alternatives.

The wealth pupil proposals of the last four legislative sessions resulted in the enactment of the wealth total aidable pupil unit formula, described above, for the apportionment of operating aid in the 1978-79 school year and thereafter.

Although a per capita measure has gained support in other states, it has not received serious consideration in New York State.

Measure Selected for Study. In studying school district wealth, it is important to use a constant denominator while varying the numerator -- e.g., substituting personal income for full valuation of real property. It would have been possible to use any common factor -- such as resident pupils in weighted average daily attendance, 1970 population figures, or school district enrollments as the denominator.

For purposes of this study, personal income or full valuation will be the numerator in the state operating aid formula computations and wealth total aidable pupil units (WTAPU), the denominator.

WEALTH PER PUPIL COMPUTATION UNIT

Existing Law. New York State aid formulas now call for computation of a per pupil wealth measure for each of 705 major school districts.

No wealth per pupil measures are calculated on a regional basis.

Alternatives. As the State considers new ways to reform its school finance apportionment system, use of alternative school district organizational units may receive consideration to help reduce the variation in local spending and local wealth. If fewer per pupil computational units were used, the range in per pupil wealth would be reduced.

For example, the range in wealth per pupil as computed for 1978-79 operating aid apportionment could be reduced from 53:1 to 6:1 if the State's 44 intermediate school district structure was used as the wealth per pupil computation unit. These 44 intermediate districts are now called Boards of Cooperative Educational Services (BOCES).

Because New York State's 57 counties have independent taxing powers, they have also been viewed as a possible computational unit. However, since many school districts are located in more than one county, the county would appear to be a less desirable computational unit than the BOCES regional structure.

Units Selected for Study. Aid ratios have been calculated for a) each of the 705 major school districts and b) BOCES regions using either full valuation (FV) or personal income (income) per wealth total aidable pupil unit (WTAPU) as the wealth measure.

In each instance the aid ratio calculation was based on existing provisions of the New York State Education Law.

CHARACTERISTICS OF NEW YORK STATE SCHOOL DISTRICTS

There is great diversity among the 705 major school districts in New York State. These school districts range in size from New York City with over one million pupils to districts with less than 75 pupils. Many districts have had to adjust to serious declines in enrollment. On a statewide basis, total enrollment has declined from 3.5 million in the 1970-71 school year to 3.2 million in 1977-78 and is projected to drop still further to 2.6 million in the 1985-86 school year.[5]

School districts exhibit a wide range in relative wealth per pupil as shown in Table 2. The projected full valuation per pupil (FV/WTAPU[6]) for 1978-79 operating aid apportionment shows a range from a low of $11,319 for Salmon River in Franklin County to a high of $595,806 for Fishers Island in Suffolk County. Thus, the wealthiest major district is 53 times wealthier than the poorest district. Even if the poorest and wealthiest districts are labeled atypical and discounted, there is a ratio of two to one (2:1) between the district at the 90th percentile and the district at the 10th percentile. These percentiles are calculated on the basis of the number of pupils within each school district.

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[5] New York State Education Department, Education Statistics. January 1978.

The wealth per pupil disparity also affects the amount of money that can be raised from the same local tax effort. The poorest district can raise only $170 per pupil with a $15 per thousand full value tax rate while the wealthiest can raise over $8,900 per pupil.

Per pupil expenditure differences within the State are significant also. The expense per pupil measure used in the operating aid formula (approved operating expense per total aidable pupil units) for the 1978-79 school year varies from an estimated high of $7,711[7] per pupil to a low of $1,080[8] per pupil, a ratio of 7:1 for the 1978-79 school year. The wide range in per pupil expenditure underscores the variations in wealth per pupil as well as school district commitment.

However, the expense per pupil for the districts at the 90th and 10th percentiles range from $2,335[9] and $1,411[10], a ratio of 1.7 to 1 for districts which contain 80 percent of the state's public school pupils.

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[6] Full value per wealth total aidable pupil units (FV/WTAPU) for the 1976-77 school year will be the basis of operating aid apportionment in the 1978-79 school year.

[7] The district with the highest per pupil expense is also the wealthiest -- Fishers Island in Suffolk County.

[8] The district with the lowest per pupil expense, according to 1977-78 estimated data provided by the State Education Department, is Prattsburg in Steuben County which has a wealth per pupil (WTAPU) for the 1978-79 operating aid of $40,162.

[9] The district at the 90th percentile is Valhalla in Westchester County with a 1976-77 full value per pupil of $87,675.

[10] The district at the 10th percentile is Susquehanna Valley in Broome County with a 1976-77 full value per pupil of $28,357.

TABLE 2

REAL PROPERTY WEALTH PER PUPIL FOR OPERATING AID APPORTIONMENT, 1978-79 SCHOOL YEAR

School District Rank	Full Valuation Per Pupil (FV/WTAPU)[b]
Wealthiest Major District	$595,806[c]
District at 90th percentile[a]	77,138[d]
District at 10th percentile[a]	31,871[e]
Poorest Major District	11,319[f]

* * * * * * * * * * * * *

Ratios	
Wealthiest to Poorest District	53:1
90th to 10th Percentile District	2:1

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[a] Percentiles are based on the number of pupils in each district; i.e., the districts were ranked from low to high according to their per pupil wealth and the number of pupils (WTAPU) in each district were summed. These percentiles show that 10 percent of the state's pupils (WTAPU) are in districts with $31,871 or less FV/WTAPU and 10 percent are in districts with $77,138 or more FV/WTAPU.

[b] Full valuation per Wealth Total Aidable Pupil Unit (FV/WTAPU) as shown in this column was obtained from a New York State Education Department computer run of April 11, 1978.

[c] Fishers Island, Suffolk County.

[d] Bethlehem, Albany County.

[e] North Babylon, Suffolk County.

[f] Salmon River, Franklin County.

ORGANIZATION OF THE REPORT

The first chapter of the report examines the nature of the problem and its significance, discusses the measurement of school district wealth in terms of existing law and the current operating aid formula, reviews alternatives in use in other states, and identifies the units selected for study. The characteristics of New York State's 705 major school districts are described.

Two theoretical models which purport to predict local school district wealth are introduced in the second chapter of the report. Reference is made to the use of full valuation of real property and the potential use of personal income to measure a school district's fiscal capacity. The relationship between personal income and full valuation is also examined.

Operating aid shifts resulting from changes in the wealth measure are reported in Chapter III and statistical Appendix A. The impact of the operating aid shifts are reported for selected school districts, large cities, large counties, and BOCES regions.

The final chapter examines the potential impact of using New York State taxable income in a public school operating aid formula. Supporting data are found in statistical Appendix B.

TWO BASES FOR MEASURING SCHOOL DISTRICT WEALTH

School district wealth per pupil is a critical factor in the apportionment of state aid to public schools. While there are various bases for measuring wealth, each has its own theoretical model and set of measurement problems which influence the distribution of aid to local school districts in New York State. This chapter examines two of the more widely supported criteria -- full value of real property and personal income.

THE THEORETICAL MODELS

Two theoretical models purport to predict local school district wealth: the "tax model" and the "income flow model". The predictive power of either model is a function of the model's underlying assumptions and the reliability of the data.

The tax model assumes the measure of wealth accurately reflects the tax base available for school purposes. In accordance with this model, full valuation of real property is the measure of wealth since the school property tax is the district's primary source of revenue.

By way of contrast, the income flow model assumes all taxes are paid out of income. Therefore, the income available to meet tax obligations constitutes the best measure of a school district's fiscal capacity. "Even when the property tax is the only local tax, income may still be a more comprehensive and sensitive measure of fiscal capacity" as Odden suggests.[1]

In theory, these arguments are persuasive. However, both models suffer from practical weaknesses. Property taxes are not the only source of tax revenue available for school purposes in New York State. New York City, which has a fiscally dependent school district, obtains revenues from income, sales and property taxes in addition to other fees and taxes. In the 1977-78 school year, six counties (Erie, Livingston, Monroe, Orleans, Sullivan, and Wayne) earmarked a portion of their sales tax to support public education. Some city school districts also received revenues from a consumer utility tax. Overall, more than $50 million (1.2 percent) of the $4.3

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[1] Allen Odden, Alternative Measures of School District Wealth (Report No. F 76-6). Denver, Colo.: Education Commission of the States, December 1976.

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billion raised through local taxation in the 1977-78 school year came from non-property taxes. Districts also obtained an estimated $372 million from other revenues (exclusive of both state aid payments and federal aid).[2] Thus, restricting the measure of wealth to just property weakens the "tax model" and limits its predictive power.

Similar problems plague the income flow model. In order for this model to accurately predict local wealth, all types of income (personal, corporate, utility, etc.) must be measured and traced to their source. This requires a sophisticated accounting system very different from current income tax accounting methods. To the degree personal income fails to include all income generated in a school district and flowing through the district, the predictive power of the income flow model also is limited.

While the question of which model is the better predictor of fiscal capacity remains moot, comparative data on alternative measures of wealth should provide some clues. Such data may stimulate development of sounder measures of school district wealth.

USE OF FULL VALUE TO MEASURE SCHOOL DISTRICT WEALTH

School district wealth per pupil is a major determinant of how much a district can afford to spend on education. The measurement of full value, or more precisely, full valuation of real property, is a complex process. The value of each parcel of real property in 991 cities and towns is determined by a local assessor. Assessors for each of these jurisdictions annually establish an assessment roll which includes each parcel of property within the assessing units. Since assessors can and do differ in their opinion of market value[3], and since many assessors do not assess parcels of real property at full value but at a fraction of full value, it would be unfair to compare municipalities in terms of the sum of their assessed values.

To compensate for the variations in local assessment practices, the State Board of Equalization and Assessment annually establishes an equalization rate for each municipality.

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[2] Estimated revenue data provided by New York State Education Department's Bureau of Educational Finance Research, July 1978.

[3] Market value is defined as the price a willing buyer would pay a willing seller in an open market transaction.

This equalization rate reflects the relationship of total taxable assessed value to total taxable full value in each assessing unit. However, before an equalization rate can be established the market value of property within each assessing unit must be determined.

The equalization rates established annually by the State Board of Equalization and Assessment are based on market surveys conducted by its staff. Each market survey uses statistical techniques requiring the stratification of assessed properties from assessment rolls by class -- e.g., residential, apartment, commercial, industrial, farm and vacant land classes. The broad classes are further stratified by assessed value into assessed value intervals, and parcels are selected randomly to represent the interval and class from which they are drawn. These sample parcels then are appraised by State Board designees.

The State Board appraiser when making his market value estimate determines a parcel's value as of a particular point in time, called the valuation date. The valuation date is consistent for all appraisals.

Before the State Board establishes equalization rates, it must determine the common standard to be used. This "full value standard" is usually based on a single market survey or on the average of two such surveys. The result of this process is that each municipality has an equalization rate arrived at by comparing its assessment roll to a full value standard as of the valuation date.

Variations in Local Assessment Practices

As mentioned above, there are now substantial variations in assessment practices within New York State localities. Five hundred forty-four (544) of the State's 705 major school districts are located in more than one assessing unit. Since equalization rates are established according to assessing units, a potential element of error is introduced in the measurement of full valuation. Studies have shown that assessors not only assess different classes of property in a locality differently, but also do not use a uniform standard within a property class. Moreover, tax inequities increased for residents of school districts located in more than one assessing unit.[4]

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[4] New York State Budget Division, Index of Property Tax Non-Uniformity Among School Districts in New York State. August 1977.

The equalization rate measures the average level of assessment of all classes within an assessing unit. This rate does not necessarily reflect the average level of assessment in any single portion of the unit. School districts must use the equalization rate for each assessing unit within the district regardless of the portion of that municipality located in the district.[5] If the portion of the municipality is not representative of the assessing unit, an inaccurate estimate of the school district's full value may result.

The current variation in local assessment practices is one of the major reasons why the equalization rates computed for 991 assessing units may impact school districts unevenly. As New York State municipalities move to a more uniform standard for assessment of real property, the accuracy of the current method of computing equalization rates is expected to increase. The reason is that the less the variation within the group from which sample parcels are selected for appraisal, the greater the probability that the sample parcel will be more representative of its property class.

Market Value Lag

Another limitation of existing full valuation data is the lag between the full value standard and the mid-point of the school year at which time the standard is used to distribute state aid. This lag of five years or more results from (a) a two to three year lag between the market valuation standard and the assessment roll to which it applies, and (b) a two year lag required by the Education Law. This law specifies use of the base year minus one full valuation and resident pupil data.[6]

Table 3 indicates the market value lag in the apportionment of state aid to school districts for the 1975-76 to 1979-80 school years. The lag time varies from five to six years as the last column of the table indicates. The lag is the time between the establishment of the market value standard and the mid-point of the school year in which the standard is used for state aid apportionment.

The significance of the market value lag lies in the nature of the change in market value. Market value changes are not uniform across the State. Surveys usually show significant differences in the rate of change in different

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[5] New York State Education Law, §3602 (1)(c).

[6] Ibid.

TABLE 3

MARKET VALUE LAG IN APPORTIONMENT OF NEW YORK STATE PUBLIC SCHOOL AID, 1975-76 TO 1979-80 SCHOOL YEARS

Market Value Standard Used For Assessment Roll	Year Assessment Roll Completed	School Year for Aid Apportionment	Market Value Lag in Years
January 1970[a]	1973	1975-76	6
January 1972[b]	1974	1976-77	5
January 1973[c]	1975	1977-78	5
October 1973[d]	1976	1978-79	5.25
July 1974[e]	1977	1979-80	5.50

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[a] The results of the January 1970 market value survey were used alone in the calculation of equalization rates for the 1973 calendar year assessment rolls.

[b] In the computation of equalization rates for 1974 assessment rolls, the State Board of Equalization and Assessment voted to weight the January 1970 survey once and the January 1973 survey twice -- thereby deriving the equivalent of a January 1972 standard.

[c] The January 1973 survey was used alone for the computation of equalization rates for 1975 assessment rolls.

[d] The October 1973 standard was computed by weighting equally the January 1973 and July 1974 market value surveys conducted by the State Board of Equalization and Assessment.

[e] The July 1974 survey is being used alone for the computation of equalization rates for 1977 assessment rolls.

areas of the State. During a period when real property values are rising rapidly, this difference in the rate of change becomes important.

Full value is not a perfect measure of a school district's fiscal capacity in New York State. Total full valuation is now determined for 705 districts on the basis of a sample from different classes of property in 991 assessing units. Municipal and school district boundaries are only coterminous in the six largest districts and a few smaller districts.

While the equalization rate sampling and estimation procedures are elaborate, the result is based on the average relationship between assessed value and market value (the equalization rate) for cities, towns, and villages -- not school districts. This averaging process may not accurately reflect the full valuation of the section of a municipality that happens to fall within a school district.

In addition, current technology and administrative practice require three to four years between the date selected for the survey standard and the establishment of final equalization rates. Moreover, the assessment rolls to which the equalization rates are applied are two years old when used for aid apportionment. Thus, State aid for the 1977-78 school year was distributed on the basis of a January 1973 market value standard and 1975 assessment roll data.

POSSIBLE USE OF INCOME TO MEASURE SCHOOL DISTRICT WEALTH

In some states, school districts coincide with county or municipal boundaries. In New York State, only a small percentage of the 705 major school districts (and the 13 districts with fewer than eight teachers) have boundaries coterminous with other political subdivisions of the State.

Accidents of history and jurisdictional boundaries within the State influence the measurement of school district relative wealth in a variety of ways. Because of these boundary discrepancies, technical problems mitigate against the introduction of wealth factors used in the school finance formulas for other states.

Definition of Income

Historically, education finance analysts have been frustrated in their attempts to evaluate school district fiscal capacity through the use of personal income data. Part of the frustration can be attributed to lack of available data by school district and inconsistencies in the definition of personal income.

Three governmental agencies collect personal income data on New York State residents: the United States Bureau of Census, the New York State Department of Commerce, and the New York State Department of Taxation and Finance. Each agency defines income according to different criteria.

Only the United States Bureau of Census and the New York State Department of Taxation and Finance have collected personal income data by school district. The Census data is nine years old, and the first final report of the New York State Department of Taxation and Finance by school district is not anticipated before February 1979.

The United States Bureau of the Census defines income to include wages and salaries, interest and dividends, public and private pensions, and other sources of monetary income, but excludes all non-monetary income.

The New York State Department of Commerce defines income to include monetary income received before deduction of income taxes and other direct personal taxes but after the deduction of Social Security taxes and government pension payments. In addition, it includes income from benefits for retirement and transfer payments such as unemployment and welfare. Non-monetary income such as wages received for in-kind services, the rental value of owner-occupied homes, and imputed interest is also included in this definition.

The New York State Department of Taxation and Finance defines income, based on personal income tax returns, to include many of the monetary sources listed by the Department of Commerce, transfer payments and imputed income excepted. Included in this definition of income are gains from the sale or exchange of real property. These gains are not reflected in Commerce estimates.

Table 4 illustrates the differences in the three definitions of income. Out of 30 categories of monetary income, the United States Bureau of Census definition includes 26; State Taxation and Finance, 17; State Commerce, 25. Non-monetary income is only included in the State Commerce definition.

Distribution of Income Wealth

Table 5 illustrates the differences in the three types of personal income data and full valuation for the State and New York City. Under each definition of personal income, New York City's share of the state's income wealth varies (from 42.9 percent to 46.7 percent in 1969 and 39.2 percent to 43.9 percent in 1974); an indication that the distribution of

(Text continues on page 21)

TABLE 4

FACTORS INCLUDED IN THE DEFINITION OF INCOME BY THREE GOVERNMENTAL AGENCIES 1974

MONETARY INCOME	U.S. Bureau of Census	New York State Department of Taxation and Finance	New York State Department of Commerce
1. Wages and Salary Income	x	x	x
2. Non-Farm Net Self-Employment Income	x	x	x
3. Farm Net Self-Employment Income	x	x	x
4. Social Security or Railroad Retirement Income	x		x
5. Public Assistance Income	x		x
6. Interest and Dividends	x	x	x
7. Net Income from Property Rentals	x	x	x
8. Net Receipts from Roomers or Boarders	x	x	x
9. Veteran's Payments	x		x
10. Periodic Receipts from Insurance Policies or Annuities	x		x
11. Public or Private Pensions	x	x	x
12. Cash Benefits	x	x	x
13. Unemployment Insurance	x		x
14. Workmen's Compensation	x		x
15. Net Royalties	x	x	x
16. Period Payments from Estates/Trust Funds	x	x	x
17. Alimony	x	x	x
18. Child Support	x		x
19. Net Gambling Gains	x	x	x
20. Non-Service Scholarships/Fellowships	x		x
21. Money Received for Transportation Subsistence if Participating in Special Governmental Training Programs	x		x
22. Property Income Received by Mutual Life Insurance Companies			x

TABLE 4 (continued)

FACTORS INCLUDED IN THE DEFINITION OF INCOME BY THREE GOVERNMENTAL AGENCIES 1974

	U.S. Bureau of Census	New York State Department of Taxation and Finance	New York State Department of Commerce
MONETARY INCOME (continued)			
23. Self-administered Pension Trust Funds		x	x
24. Income Retained by Fiduciaries on Behalf of Beneficiaries			x
25. Excess of Accrued Interest over Interest Paid in U.S. Savings Bonds			x
26. Regular Contributions for Support from Persons Who Do Not Reside in Same Living Quarters	x		
27. Income from Roomers/Boarders Residing in Households	x	x	
28. Employee Contributions for Social Insurance	x	x	
29. Income from Private Pension Annuities	x	x	
30. Income from Sale or Exchange of Property	x	x	
NON-MONETARY INCOME			
1. Wages Received In Kind			x
2. Net Rental Value of Owner Occupied Homes and Farm Dwellings			x
3. Imputed Interest			x

TABLE 5

AGGREGATE FULL VALUATION AND PERSONAL INCOME AS DEFINED BY THREE GOVERNMENTAL AGENCIES FOR 1969 and 1974[a]

		Personal Income		
	Full Valuation[b]	U.S. Bureau of the Census[c]	New York State Department of Taxation & Finance[d]	New York State Department of Commerce[e]
	----------Dollar Amounts in Millions----------			
New York City				
1969	$49,027 (43.3%)[f]	$29,198 (44.4%)	$23,430 (42.9%)	$38,021 (46.7%)
1974	71,329 (39.4%)	36,952 (41.7%)	30,876 (39.2%)	48,944 (43.9%)
* * * * *	* * * *	* * * *	* * * *	* * * *
Total State				
1969	$113,265 (100.0%)	$65,815 (100.0%)	$59,270 (100.0%)	$ 81,385 (100.0%)
1974	180,825 (100.0%	88,624 (100.0%)	74,824 (100.0%)	111,540 (100.0%)

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[a] 1969 figures are listed as a basis of comparison with the Census data used in the study. 1974 was the most recent year that data for all four wealth measures were available. See Appendix B-1 for 1975 and 1976 data.

[b] Full valuation as reported by the New York State Education Department for use in State aid apportionment. These data differ from full valuation data reported by other agencies for other uses.

[c] 1969 calendar year data were obtained in conjunction with the 1970 Census. The 1974 figures were obtained from Population Estimates and Projections, U.S. Bureau of the Census, May 1977.

[d] As reported from New York State personal income tax returns and as defined by the New York State Tax Law. Only data for New York State residents are shown.

[e] Based on statewide estimates of the Bureau of Economic Analysis of the U.S. Department of Commerce.

[f] Numbers in parentheses indicate percent of total State.

personal income wealth is a function of the definition used. As a result, the definition of personal income affects the amount of operating aid a district will receive. For example, New York City would probably receive less operating aid under the New York State Department of Commerce definition and more operating aid under the New York State Department of Taxation and Finance definition. One reason may be that transfer payments were included in the Commerce definition. For New York State, taxable income as reported for State tax purposes is a smaller sum than either the U.S. Census personal income or the State Commerce Department's income total. In 1974, State taxable income was equal to 84.4 percent of the U.S. Census personal income estimate and to 67.1 percent of the State Commerce Department's personal income amount.

Income Data Collection in New York State

Chapter 309 of the Laws of 1977 required the New York State Department of Taxation and Finance to collect income data by school district of residence. A school district of residence line was added to the 1977 personal income tax form, and taxpayers filing personal income tax returns were required to identify their school district of residence. The use of income tax data pose certain problems. Not all taxpayers know the school district within which they reside; preliminary reports from the State Department of Taxation and Finance indicate that about 10 percent of the first 4.4 million taxpayers left the line blank. Another group of taxpayers (about 2 percent of the total) reported a school district code which was incompatible with the county in which they reside. Further audit checks will proceed as the remainder of the New York State residential returns are processed; a total of approximately 6.6 million returns is expected.

THE RELATIONSHIP OF PERSONAL INCOME AND FULL VALUE

Since both full valuation and personal income purport to measure wealth, are they related? An attempt was made to answer this question using 1974 adjusted personal income per capita data and 1974 full valuation per capita data by property class for each of the State's 57 counties and New York City. The data were compared graphically (scatterplots) and analyzed statistically (correlation coefficients) to determine the nature of the relationship. Because of data limitations and the need for adjustments[7] to achieve comparability, the findings of this study are suggestive rather than definitive.

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[7] Full valuation of each property class was available for cities and towns only, and some of the assessment rolls used to determine property class were outdated.

Full Valuation of All Classes of Property and Personal Income

The linear relationship between total full value (all classes of property) per capita and personal income (Commerce 1974 definition) per capita was examined. As full valuation per capita increased, personal income per capita was less predictable. A low correlation coefficient ($r = .434$)[8] supported this conclusion.

Full Valuation of Non-Business Property and Personal Income

Full valuation of commercial, industrial and utility properties were factored out of the county full value per capita data, and the data were rerun. Since no one resided on these land parcels, an adjustment to the total full valuation was required, but county population figures were unchanged.

By manipulating the data in this way, the linear relationship ($r = .463$) was improved but not significantly. The impact of factoring out commercial, industrial, and utility valuations was minimal on the county level. This may not hold true, however, if the same analysis were performed on school districts because school districts exhibit a greater variance in the relative proportion of commercial, industrial and utility properties.

Full Valuation of Residential Property and Personal Income

Finally, full valuations of vacant, farm and State-owned lands, special franchise and ceiling railroad properties were factored out leaving only the valuation of residential and apartment properties. The findings showed a stronger coefficient of correlation (.705) and an increase in predictive power.

Clearly, these data suggest that when comparable figures for property valuation and income (residential full value and personal income) are used, a strong positive relationship is evident and personal income appears to be a reasonable proxy measure for the residential portion of full value.

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[8] A coefficient of correlation (r_{xy}) is simply a descriptive statistic indicating the relationship between two sets of data x and y (e.g., x = full valuation; y = personal income). This statistic can range from a +1.00 to a -1.00. The sign indicates the direction of the relationship; the decimal, the strength of the relationship. Perfect correspondence between the two sets of data is expressed as +1.00, perfect inverse correspondence is expressed by -1.00; lack of correspondence by 0.00.

SUMMARY

Both personal income and full valuation of real property data suffer from technical weaknesses and thus are imperfect measures of school district fiscal capacity. Clearly, improvements in these data are possible if the State is willing to underwrite the cost. The underlying public policy question is which of the two sets of data is the better measure of fiscal capacity and is improvement of the data worth the cost.

This question is not easily answered. There appear to be fewer problems with full valuation of real property, perhaps because there is an existing body of knowledge and technological developments designed to reduce error. More problems are anticipated with the new 1977 personal income tax data reported by school district. Many of these problems may be resolved with experience. However, the State must decide if it wishes to use taxable personal income, which represents less than 70 percent of all State personal income, as a criterion for the apportionment of $3.4 billion in aid to the State's 705 major school districts.

ANALYSIS OF DISTRICT OPERATING AID SHIFTS CREATED BY CHANGES IN WEALTH MEASURE

When New York State introduces income into a wealth measure for the apportionment of operating aid, it is probable that the resultant wealth measure will include both real property valuation and personal income. The data presented in this chapter of the report tend to magnify the potential aid shift, because 1970 U.S. Census Bureau personal income data have replaced 1976 full valuation data in the operating aid apportionment formula enacted for the 1978-79 school year.

Such a replacement of income data, for experimental purposes, overstates the impact of the income data, but the trend of the shift is valid. The aid data shown in this chapter also reflect changes in relative economic conditions within the State in recent years.

New York State now uses an aid ratio formula to distribute operating aid funds. This type of formula means that approximately the same amount of money can be allocated using any wealth base. Thus, even though New York State full valuation for 1978-79 aid purposes totals $204 billion and 1970 census personal income for New York State only totals $66 billion, both wealth measures can be used to generate $2.6 billion in 1978-79 formula operating aid for New York's school districts.

DESCRIPTION OF 1978-79 FORMULA OPERATING AID

Background information on New York's formula for apportioning operating aid in the 1978-79 school year and thereafter is helpful in the analysis of the information reported in this chapter. Three aspects of this formula are discussed below, combined with information on the results of the Income/WTAPU aid shift.[1]

Aid Ratio Calculations and Formula Aid Options

Existing Law. In the apportionment of operating aid for the 1978-79 school year, two aid ratios will be calculated using a district's 1976-77 full valuation per pupil (FV/Wealth TAPU). In both cases the maximum aid ratio for districts with the lowest full valuation per pupil is .900, while the minimum aid ratio for the districts with the greatest full valuation per pupil is .000. The algebraic formula for the computation of aid ratios relates the wealth of a district to the State average full valuation per pupil; this average is $59,000 for operating aid apportionment in the 1978-79 school year.

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[1] The next major section of this chapter briefly describes the differences between formula operating aid and payable operating aid.

The purpose of these aid ratio formulas is to allocate aid in inverse proportion to a district's capacity for levying taxes on real property up to a specified amount ("ceiling") per pupil. The formula self-adjusts each year -- annually relating a district's full valuation per pupil to the new State average full valuation per pupil.

The operating aid formula, established by Chapter [illegible]4 of the Laws of 1978, provides for the use of two separate tiers or ceilings. A separate aid ratio is computed for each of the two tiers.

- The Tier 1 Aid Ratio is used for the calculation of aid for school district approved operating expenditures through the first ceiling or tier which is $1,450 per pupil. The aid ratio formula operates in such a manner that the State formula aid will equal 49 percent of the first ceiling of $1,450 (or $710.50 per pupil) for any district with a full valuation per pupil equal to the State average (i.e., $59,000 for the 1978-79 school year).

- The Tier 2 Aid Ratio is computed to determine aid payments for district approved operating expenditures from $1,450 to $1,500 per pupil. The Tier 2 aid ratio formula gives a district of average wealth 20 percent of the $50 difference between Tier 1[2]($1,450) and Tier 2 ($1,500), or $10 per pupil.

Districts with full valuation per pupil (FV/WTAPU) above the State average wealth level will be aided by a smaller percentage of their approved operating expenditures and districts below the average, by a larger percentage.

In the 1978-79 school year the basic two-tier formula will be the most beneficial operating aid option for all districts with $86,000 or less FV/WTAPU.

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[2] The actual formula for the calculation of Tier 1 and Tier 2 aid ratios is shown in Appendix Table A-1.

Districts with full valuation per pupil above $101,000 will elect to receive a minimum guarantee of $360 per pupil under the State operating aid formula options. In 1978-79 a taper formula option will aid those districts with full valuations per pupil from $86,000 up to $101,000. Districts at the $86,000 level will receive $375 per pupil under this formula.

Substitution of Income for Full Valuation. Using income as the measure of wealth, operating aid was computed for each school district (a) by substituting 1970 U.S. Bureau of the Census personal income data for 1976 full valuation in the operating aid formula enacted for the 1978-79 school year and (b) by keeping all other current law formula factors constant.

Comparison of Tier 1 Aid Ratios. The substitution of 1970 U.S. Census personal income for 1976 full valuation data has produced significant changes in the number of districts electing each of the three basic formula aid options, as Table 6 indicates.

Use of U.S. Census 1970 personal income data as the wealth base reduced the number of extremely wealthy districts eligible for minimum flat grants of $360 per pupil from 72 districts when a FV/WTAPU aid ratio is used to 25 districts when an Income/WTAPU aid ratio is used. Similarly, the number of moderately wealthy districts benefiting from the flat grant taper contained in the 1978-79 formula declined from 37 to 22. As a consequence, if Income/WTAPU was the 1978-79 wealth measure, the State's two-tier ceiling formula would be the option for 656 of the 703 major districts for which 1970 Census income data were available. Under current law it was the most favorable option for 600 districts.

Table 7 helps to illustrate the differences in aid ratios even more dramatically. With the use of 1976 full valuation per wealth pupil (FV/WTAPU), there were 358 districts (or roughly half of the total number of major districts) which had Tier 1 aid ratios ranging from .611 to .900. This means that the FV/WTAPU range for these districts with low wealth per pupil ranged from $45,000 to $11,319.

In contrast, there are 504 poor districts when Income/WTAPU was substituted for full valuation per pupil in the 1978-79 operating aid formula.

Aid Apportionment Pupil Count

In the computation of operating expense aid under the formula for the 1978-79 school year, a district first determines

(Text continues on page 30)

TABLE 6

COMPARISON OF 1978-79 FORMULA OPERATING AIDS BASED ON USE OF FULL VALUE/WEALTH TAPU (FV/WTAPU) AND PERSONAL INCOME/WEALTH TAPU BY FORMULA OPTIONS

Operating Aid Formula Options[a]	1978-79 Formula Operating Aid	
	Based on FV/WTAPU[b]	Based on Income/WTAPU[c]
Minimum Guarantee ("Flat Grant")		
Aid Per Pupil (TAPU)	$360	$360
Tier 1 Aid Ratio Range	.000 to .126	.000 to .126
Wealth Per Pupil Range	$595,806 to $101,000	$50,450 to $33,074
Number of Districts	72	25
Flat Grant Taper Guarantee		
Aid Per Pupil (TAPU)	$361 to $375	$361 to $375
Tier 1 Aid Ratio Range	.135 to .256	.135 to .256
Wealth Per Pupil Range	$101,000 to $86,000	$32,741 to $28,135
Number of Districts	37	22
Two-Tier Ceiling Formula		
Aid Per Pupil (TAPU)	$376 to $1,305	$376 to $1,305
Tier 1 Aid Ratio Range	.259 to .900	.259 to .900
Wealth Per Pupil Range	$85,723 to $11,319	$28,041 to $571
Number of Districts	600	656

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[a] Under existing New York State law for the 1978-79 school year the wealthiest districts benefit most from the "flat grant" of $360 per pupil; moderately wealthy districts from the taper guarantee; and all other districts, from the two-tier ceiling formula.

[b] Full valuation per wealth total aidable pupil unit (FV/WTAPU) for the 1976-77 school year. The total number of districts equal 709, with each of New York City's boroughs shown as a separate district.

[c] 1970 U.S. Census personal income per 1976-77 wealth total aidable pupil unit (Income/WTAPU). The total number of districts only equals 703, because income data are missing for six districts.

TABLE 7

NUMBER OF DISTRICTS BY TIER 1 AID RATIO LEVEL FOR TWO WEALTH MEASURES, 1976 FULL VALUATION PER PUPIL (FV/WTAPU) AND 1970 U.S. CENSUS PERSONAL INCOME PER PUPIL (INCOME/WTAPU)

	Number of Districts	
Tier 1 Aid Ratio[a]	FV/WTAPU[b]	Income/WTAPU[c]
.000 - .089	67	18
.090 - .219	25	20
.220 - .350	51	24
.351 - .479	69	55
.480 - .610	133	82
.611 - .735	249	242
.740 - .900	109	262
Total	703	703

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[a] The formula for calculation of the Tier 1 Aid Ratio is shown in Appendix Table A-1.

[b] Full valuation per wealth total aidable pupil unit (FV/WTAPU) for 1976-77 school year.

[c] 1970 U.S. Census personal income per 1976-77 wealth total aidable pupil unit (Income/WTAPU).

[d] Six districts were deleted from both the FV/WTAPU and Income/WTAPU totals, because 1970 Census income data are not available. Aid ratios for each of New York City's five boroughs are included within the table.

its aid per pupil by calculation of aid ratios and selection of the most favorable formula aid option.

After aid per pupil amounts have been established, a district determines its total aidable pupil unit (TAPU) count for aid apportionment. The TAPU count is based on the district's actual average attendance computed without choice of the highest attendance periods. The weightings shown for WTAPU in Table 1 -- both for the basic units of attendance and the additional weightings -- are also used to calculate TAPU. However, the TAPU count also includes a 0.12 total weighting for summer school pupils and a 0.50 total weighting for approved evening school pupils.

There are two other significant differences between TAPU and WTAPU. The WTAPU count is based on pupils residing in the district, while the TAPU count reflects the attendance of pupils enrolled in the district schools -- regardless of the district in which they are domiciled. Thus, out-of-State pupils are included in the TAPU count, but they are not reflected in the WTAPU pupil count. Two different years are also used for these calculations. In computing TAPU, a district uses its base year attendance (i.e., 1977-78 school year data for 1978-79 operating aid apportionment) and for WTAPU it uses its attendance for the base year minus one (i.e., 1976-77 school year data for 1978-79 operating aid apportionment).

Per Pupil Operating Expense

Under the legislation adopted for the 1978-79 school year, a district is credited with a per pupil operating expense of $1,450 per pupil -- even if it has a lower per pupil expenditure level. For these reasons, all districts for which the two-tier/ceiling option is the most beneficial formula will be credited with a per pupil expense of $1,450 for aid calculation puposes.

Aid under the second tier of this formula operating aid option is available only to districts with a per pupil expense of more than $1,450. However, districts receive no credit for per pupil expenditures in excess of $1,500.

Table 8 indicates that 233 of the 275 districts with a base year per pupil operating expense of $1,500 or less have a Tier 1 aid ratio from .611 to .900 when FV/WTAPU is the wealth measure. However, 265 districts are labeled as poor when 1970 U.S. Census personal income data become the wealth base criterion.

TABLE 8

NUMBER OF DISTRICTS BY OPERATING EXPENSE PER PUPIL AND TIER 1 AID RATIO LEVEL FOR TWO WEALTH MEASURES, 1976 FULL VALUATION PER PUPIL (FV/WTAPU) AND 1970 U.S. CENSUS PERSONAL INCOME PER PUPIL (INCOME/WTAPU)

Approved Operating Expense Per Pupil[a]	Total Number of Districts	Number of Districts, by Tier 1 Aid Ratio for Two Wealth Measures[b]					
		0 - .350		.351 - .610		.611 - .900	
		FV/WTAPU	Income/ WTAPU	FV/WTAPU	Income/ WTAPU	FV/TAPU	Income/ WTAPU
$0 - 1,500	275	3	3	39	7	233	265
0 - 1,300	63	2	-	7	-	54	63
1,301 - 1,400	94	0	1	6	3	88	90
1,401 - 1,500	118	1	2	26	4	91	112
$1,501 - 1,800	196	21	3	76	37	99	156
1,501 - 1,600	98	8	1	32	15	58	82
1,601 - 1,700	60	6	1	25	10	29	49
1,701 - 1,800	38	7	1	19	12	12	25
$1,801 - 2,400	136	45	12	68	54	23	70
1,801 - 2,000	55	13	3	29	20	13	32
2,001 - 2,200	51	20	6	23	22	8	23
2,201 - 2,400	30	12	3	16	12	2	15
$2,401 and above	96	74	44	19	39	3	13
2,401 - 2,800	55	38	19	14	26	3	10
2,801 and above	41	36	25	5	13	-	3
Total[c]	703	143	62	202	137	358	504

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[a] The 1978-79 operating aid formula uses a district's 1977-78 approved operating expenditures per pupil (1977-78 total aidable pupil units) as the criterion for determining a district's formula aid. No district is aided for expenditures of more than $1,500 per pupil.

[b] The two wealth measures on which the Tier 1 aid ratios are shown were defined in footnotes a and b of Table 7 (Page 29).

[c] Excludes six districts for which 1970 census personal income data were not available.

The shifts are more dramatic when the aid ratios of the 96 districts spending $2,401 or more per pupil in the 1977-78 school year are compared. Of these 96 districts, 74 have aid ratios ranging from .000 to .350 when FV/WTAPU is the wealth base. However, only 44 of these districts have low aid ratios when Income/WTAPU is the wealth criterion. Thus, under existing law, only 22 of the State's highest 96 spending districts (22.9 percent) are entitled to per pupil formula aid for 1978-79 of more than $509. However, substitution of 1970 U.S. Census personal income for 1976 full valuation in the formula would make it possible for 52 of these 96 districts (54.2 percent) to become eligible for 1978-79 per pupil formula aid of more than $509.[3]

PAYABLE VS FORMULA OPERATING AID

The aid tables presented throughout this report deal with formula operating aid per pupil for the 1978-79 school year.[4] Under the new operating aid formula adopted by the 1978 Legislature, total formula operating aid will equal an estimated $2.6 billion for the 1978-79 school year, and the total estimated payable operating aid will be $2.51 billion.[5]

Each major school district will calculate payable operating aid based on the most advantageous formula aid option available under the omnibus education aid bill enacted by the 1978 New York State Legislature. For the vast majority of these districts, formula operating aid per pupil and payable operating aid per pupil totals will not be the same.

Formula Operating Aid

Since the 1974-75 school year, New York State school districts have had an opportunity to choose from among three options to calculate formula aid. The three options, as they will operate for the 1978-79 school year, have been described in the preceding section.

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[3] This formula aid per pupil amount is computed by multiplying .351 by the first tier ceiling of $1,450. Districts with Tier 1 aid ratios of .351 do not qualify for aid under the second tier of the formula because of their per pupil wealth.

[4] Formula operating aid per pupil is the actual amount of aid generated by the operating aid formula per total aidable pupil unit.

[5] The payable operating aid per pupil is determined by dividing the total payable aid for the district, after the caps on saveharmless options have been applied, by the district's total aidable pupil units.

The total amount of formula operating aid for the 1978-79 school year is expected to be $2.6 billion.

Payable Operating Aid

As specific proposals for the inclusion of personal income in the State's school district wealth measure begin to surface, certain transitional provisions are expected to receive consideration. Use of such provisions will mean that payable aid does not equal formula aid during the transition period.

Pursuant to Chapter 74 of the Laws of 1978, districts whose 1978-79 formula aid is lower than their 1977-78 payable operating aid total have an opportunity to choose among two different types of saveharmless provisions. According to data published by the State Education Department in April 1978, there will be 209 districts (including three New York City boroughs) receiving aid on a saveharmless basis in the 1978-79 school year. Such districts will receive saveharmless aid payments totalling $70.1 million.

Districts whose 1978-79 formula aid exceeds their 1978-79 payable operating aid must check to see if their potential increase is limited by one of three different types of maximum aid caps.[6] The State Education Department data shows 434 districts (including two New York City boroughs) whose aid increase is limited by one of the 1978-79 aid caps. The total amount which will be withheld by these maximum aid provisions is estimated to be $156 million.

Out of 709 districts (counting each of New York City's boroughs as a single district), only 66 districts will actually have a payable aid total equal to the formula aid amount.[7] Formula operating aid for the 1978-79 school year will total approximately $2.6 billion.

ANALYSIS OF PER PUPIL FORMULA AID SHIFTS WITH INCOME USE

The impact of replacing the wealth base was analyzed on a per pupil basis for 15 of New York State's 705 districts. This 15 district sample included the five largest districts, the five poorest districts, and five of the State's 18 wealthiest districts.[8] For purposes of analysis 13 of the 18 wealthiest districts were rejected because each district had a pupil population (TAPU) of less than 500. See Appendix Table A-2 for more information on the 15 sample districts.

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[6] Maximum aid "caps" limit the amount of the formula aid increase which a district may receive in a single school year.

[7] Payment aid totals exclusive of New York City were obtained from an unpublished New York State Budget Division report dated April 11, 1978. New York City's data were adjusted to reflect information received after April 11.

Poorest Districts Appear Wealthier

If 1970 U.S. Census personal income replaced full valuation as the wealth measure for school aid formulas, each of the State's five lowest wealth districts (as determined by FV/WTAPU) would appear to be wealthier. Salmon River, the State's poorest district under the existing wealth measure (FV/WTAPU), experiences a drop in formula aid from $1,347 to $1,290 or a loss of $57 per pupil.

The per pupil aid losses for the other four low wealth districts[9] range from $6 to $46.

New York's five poorest districts had per pupil expense levels in the 1977-78 school year ranging from $1,180 in Brushton Moira to $1,504 in Salmon River.[10] Combined with its per pupil aid of $1,347, Salmon River would have to levy a full value tax rate slightly in excess of $13 per thousand to maintain the same spending level. If income replaced full value as the wealth measure, Salmon River would have to increase its tax rate by $5 per thousand to make up the $57 lost in formula aid per pupil.

Big Five Cities Look Richer

Use of 1970 U.S. Census personal income data as a wealth measure causes all of the Big Five Cities to appear wealthier than they do when 1976 full valuation data are used in the 1978-79 operating aid formula.

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[8] Full valuation per wealth total aidable pupil unit (FV/WTAPU), as computed for 1978-79 aid apportionment, was the criterion used for selection of the poor and the wealthy school districts discussed in this section.

[9] These four are Brasher Falls (St. Lawrence County), Stockbridge Valley (Madison County), Brushton Moira (Franklin County), and Madrid Waddington (St. Lawrence County). Salmon River is in Franklin County.

[10] The per pupil expense data used in this section are estimates of numbers which will be used to determine a district's expense level for apportionment of 1978-79 operating aid: 1977-78 approved operating expense divided by the sum of the district's total aidable pupil units.

The greatest relative impact is in Buffalo where the district's aid ratio drops from .614 to .349; this type of aid ratio variance has the same impact as having the district's full valuation per pupil jump from $44,672 to over $75,000 for purposes of operating aid apportionment in the 1978-79 school year.

Buffalo's full value wealth per pupil gives it a rank of 17 out of the 30 major districts in Erie County: 16 districts have more per pupil wealth and 13 districts, less. However, if 1970 Census personal income were the sole wealth criterion, Buffalo would become the 5th wealthiest district in the county.

The per pupil operating expense of all of the Big Five Cities is above $1,500 for the 1977-78 school year. Therefore, each of these districts has a full value tax rate of more than $13 per thousand -- the level needed by any district not aided on the basis of the flat grant or taper options -- in order to spend $1,500 per pupil. The expenditure levels of these five cities ranged from an estimated $1,649 for Syracuse to $2,195 for Rochester. The 1978-79 per pupil formula aid levels for these districts range, under current law, from $397 for Yonkers (the wealthiest of the four districts) to $910 for Buffalo (the poorest Big Five City).

Use of 1970 Census personal income as the sole wealth criterion causes the following changes in per pupil formula operating aid for the Big Five Cities during the 1978-79 school year: Yonkers, -$37 (9.3 percent); New York City, -$109 (15.4 percent); Rochester, -$146 (19.9 percent); Syracuse, -$314 (40.0 percent); Buffalo, -$404 (44.4 percent). To raise $404 per pupil, Buffalo requires a full value tax rate of $9 per thousand.

Formula Aid of Wealthy Districts Doubles or Triples

The five wealthy districts[11] selected for this sample all are currently entitled to per pupil formula aid of $360 per pupil. For them, a $13 per thousand full valuation tax rate yields amounts ranging from $2,555 (Downsville, Delaware County) to $4,150 (East Hampton, Suffolk County). None of the five districts need tax rates at this level to sustain their current expenditure levels.

Use of personal income drastically changes the wealth standards of these five districts with high full valuation per pupil. (See Appendix Table A-2.) All five would be poorer than an average wealth district. The Town of Webb (Herkimer County) becomes a relatively poor district entitled to per pupil formula aid of $1,194 -- more than triple its current flat grant guarantee. The next largest aid increases would go to Downsville (from $360 to $1,062 per pupil) and to Hendrick Hudson (from $360 to $997 per pupil).

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[11] The only one of the five districts not mentioned in this commentary is South Hampton (Suffolk County).

If Hendrick Hudson, a Westchester district with more than 3,000 pupils, could continue to keep its yield from its current property base ($2,791 per pupil with a $13 full value tax rate per thousand) while collecting $997 per pupil in State formula aid, the large hard pressed city districts in Westchester County -- Yonkers, New Rochelle, Mount Vernon, and White Plains -- would protest.

USE OF CENSUS INCOME REDUCES AID TOTALS IN 16 LARGE CITIES

New York State has five cities with a population of 125,000 or more. According to the 1970 U.S. Census, the population of the 12 next largest cities ranged from 38,000 to 124,999. A comparison of the aid payments to these 17 cities when 1970 Census personal income replaces full valuation as the wealth measure is shown in Appendix Tables A-3 and A-4.

When 1970 Census personal income replaces 1976 full valuation in the 1978-79 New York State operating aid formula:

- Formula aid drops for 16 of the 17 largest cities. For the seventeenth city, there would be no change since White Plains would continue to be aided on the basis of the "flat grant" option.
- The 17 cities, which collectively have 37.9 percent of the State's pupils, would have their share of the total formula operating aid reduced from 34.9 percent to 26.3 percent.
- New York City, with about 29.5 percent of the State's pupils, would see its formula aid drop from $688 million (26.6 percent of the State total) to $522 million (20.1 percent of the total).
- Only 3 of the 17 cities (Elmira, Jamestown and Niagara Falls) would receive more than the average amount of formula operating aid per pupil. All of the other cities (14) would have an aid share which is smaller than their share of the State's pupil population (TAPU). In contrast, use of full valuation gives 9 of the 17 largest cities (including Buffalo and Syracuse) a formula aid share which is higher than their share of the State's pupil population.

For the area of the State outside of these 17 cities, use of 1970 U.S. Census personal income as the wealth measure would increase formula operating aid by $223 million, or 13.2 percent.

Central Cities Lose and Suburbs Gain in Nine Metropolitan Areas

New York State has nine standard metropolitan statistical areas (SMSAs). In each one, the area's central city (or cities) would lose formula operating aid if 1970 U.S. Census personal income replaces 1976 full valuation in the 1978-79 operating aid formula. However, the suburbs in all of these SMSAs --except the Utica-Rome area -- would have aid gains. Data on each of these SMSAs is presented in Appendix Table A-5.

The New York City SMSA is typical of the other metropolitan areas. Use of 1970 Census personal income would reduce the formula operating aid for New York City, Yonkers, and a group of eight other cities in the SMSA from $725.10 million to $553.61 million. However, aid for the New York City suburbs would rise from $544.64 million to $664.19 million.

The portions of the State which are not located in a metropolitan area would have an aid increase from $447.25 million to $515.82 million -- 15.3 percent. In contrast, there would be an aid loss of $68.88 million -- or 3.2 percent -- within the nine metropolitan areas. The suburban SMSA gains are not large enough to offset the central city losses.

USE OF INCOME UNEVENLY IMPACTS LARGE COUNTIES

New York State has 17 counties (exclusive of the five boroughs within New York City) with a 1970 Census population of more than 140,000. These 17 counties are frequently spotlighted in tables prepared by the Budget Division because of their large pupil populations. For 1978-79 school aid payments, these 17 counties have a combined 1.7 million pupil population; New York City, nearly one million pupils; and the remaining 40 counties, fewer than 600,000 pupils.

Replacement of 1976 full valuation with 1970 Census personal income data would produce total formula operating aid increases for ten of the 17 largest counties as Appendix Table A-6 indicates.

A comparison between Appendix Table A-6 with the three previous Appendix Tables (A-3 to A-5) makes it obvious that within these 17 counties, the same general trend is occurring. Large cities are losing aid, and the surrounding districts are gaining. For example, the total aid loss in Erie County when 1970 Census personal income replaces full valuation is $20.85 million. However, Buffalo's aid loss -- which is also reflected in the County total -- is $22.55 million. For the City this means an aid loss of 44.4 percent; for Erie County as a whole, the loss is reduced to 11.6 percent.

With one exception, the State's 16 largest cities (outside of New York City) are located in the counties with a population of over 140,000. The City of Elmira is in Chemung County which had a 1970 population of 102,000.

Table 9 compares the 15 other large cities and the 11 counties in which they are located, by the percentage of aid change when 1970 Census personal income replaced 1976 full valuation in the 1978-79 operating aid formula.

The pattern is clear in every one of the 11 counties: cities lose and suburbs gain. In seven counties the percentage of aid loss in the city is much larger than that for the county as a whole. In the four other counties (Albany, Chautauqua, Monroe, and Westchester), the aid gains of the surburban districts were so large that they actually offset the city aid loss to provide an overall aid increase for the total county.

USE OF BOCES REGIONS

Since the use of 1970 personal income appears to have a devastating impact upon cities, each of the State's 44 BOCES (Boards of Cooperative Educational Services) regions was treated as a single school district in order to compute Tier 1 aid ratios using 1976 full valuation and 1970 Census personal income per wealth total aidable pupil unit (WTAPU) data. The results of this analysis are presented in Appendix Table A-7.

A number of the BOCES regions, in which large cities are located, show aid ratio declines, including the regions in which Buffalo, Rochester, Syracuse, Yonkers, and Albany are located.[12]

Appendix Table A-7 dramatizes the differences between relative proportions of full valuation and 1970 personal income in some of the less urban portions of the State. Two areas in which there were a fairly significant proportion of vacation property highlight the magnitude of the possible aid increases.

-- The BOCES with the highest average full valuation per pupil (WTAPU) is located in eastern Suffolk County. The average full valuation per pupil for the 21,535 pupils in this region (Suffolk 1) was

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[12] For purposes of this analysis, the districts which do not belong to a BOCES (excluding New York City) were assigned to the BOCES region in which the district is geographically located.

TABLE 9

AVERAGE CHANGE IN 1978-79 FORMULA AID WHEN 1970 CENSUS PERSONAL INCOME REPLACES 1976 FULL VALUATION AS THE WEALTH MEASURE, NEW YORK STATE COUNTIES WHICH HAVE A POPULATION OF MORE THAN 140,000 (EXCLUSIVE OF THE 5 NEW YORK CITY BOROUGHS) AND A CITY WITH A POPULATION OF MORE THAN 38,000

Counties Which Contain a Large City (over 38,000) and a 1970 Population Greater Than 140,000

Name	Percent Aid Change
Albany	+ 6.89%
Broome	- 3.26
Chautauqua	+ 4.40
Erie	-11.64
Monroe	+ 0.86
Niagara	- 3.78
Oneida	-11.03
Onondaga	- 7.64
Rensselaer	-12.02
Schenectady	- 4.57
Westchester	+ 9.68

Selected Cities With a 1970 Population Greater Than 38,000

Name	Percent Aid Change
Albany	- 4.51%
Binghamton	-25.74
Jamestown	-16.55
Buffalo	-44.40
Rochester	-20.00
Niagara Falls	-12.13
Rome	-13.56[a]
Utica	-30.53[a]
Syracuse	-37.97
Troy	-29.20
Schenectady	-21.00
Mt. Vernon	-31.75[b]
New Rochelle	- 8.63[b]
White Plains	0.00[b]
Yonkers	- 8.82[b]

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[a] Both cities are in Oneida County.

[b] All four cities are in Westchester County.

Source: Appendix Tables A-4 and A-6.

$180,920 and the majority of pupils are in districts which are only entitled to the $360 per pupil flat grant for 1978-79. If 1970 Census personal income were the wealth base, the average per pupil formula aid would be $937 for the 1978-79 school year.

-- Sullivan County, the home of some of the famous Catskills resort hotels, is another county which is much wealthier when judged on the basis of its 1976 full valuation. For this county, average per pupil aid would increase by $633 -- or from $381 to $1,014.

SUMMARY

During the 1978-79 school year New York State's 705 major school districts will receive $3.4 billion in State aid, including $2.51 billion in payable operating aid. For 600 districts the most beneficial option for computation of formula operating aid is one called the "two-tier ceiling formula". The apportionment of school district aid pursuant to this option is inversely related to local school district wealth and in direct proportion to need.

The purpose of this chapter was to examine the shifts in school district aid produced when 1970 personal income data (from the U.S. Bureau of the Census) per wealth total aidable pupil unit (Income/WTAPU) replaced full valuation per wealth total aidable pupil unit (FV/WTAPU) as the measure of wealth in New York State's operating aid formula. Because of limitations in the personal income data, the findings are suggestive rather than definitive. Nevertheless, trends in the data are clear.

By replacing full value with 1970 personal income data (U.S. Bureau of Census) in the numerator of the wealth measure in the State's operating aid formula and holding all other factors constant, the following trends were evident:

-- The State's five poorest districts appeared wealthier and experienced per pupil aid losses which are significant in terms of the district tax base.

-- The Big Five Cities appeared wealthier and also experienced a decline in formula operating aid.

-- Central cities in the State's nine standard metropolitan statistical areas had a similar increase in per pupil wealth (i.e., formula aid declined), and suburban areas as a whole looked poorer (i.e., formula aid increased).

-- The five wealthiest school districts with pupil populations over 500 appeared poorer than the school district of average wealth and experienced substantial increases in operating aid; i.e., double or triple their current flat grant guarantee ($360 per pupil).

-- Ten of the State's 17 largest counties (exclusive of New York City's five boroughs) had an overall formula aid increase. However, in the 11 large counties containing one or more cities with a 1970 population greater than 38,000, a common pattern was found. Cities lost aid, and suburban districts, collectively, either had formula aid increases or aid losses which were smaller than those of the cities.

-- Average formula aid increased in many of the State's 44 Boards of Cooperative Educational Services (BOCES) regions -- particularly in regions with vacation property.

POTENTIAL IMPACT OF USE OF NEW YORK STATE TAXABLE INCOME AS A CRITERION OF SCHOOL DISTRICT WEALTH

The purpose of this study has been to assess the impact of using personal income as a factor in determining the wealth of New York State school districts. The previous chapter described the types of shifts which would occur among the State's 705 districts if 1970 U.S. Census personal income had replaced 1976 full valuation as the wealth measure for the computation of formula operating aid for the 1978-79 school year.

The computer analysis reported in the preceding chapter will be repeated when complete taxable personal income data are available, by school district, from the New York State Department of Taxation and Finance. Since some 1977 individual taxpayer returns will not be received until December 1978, a final report on the first-year data obtained through use of school district codes on the State's tax returns will not be available until 1979.

Because the cost of obtaining and processing accurate income data by school district is high, it is important to narrow the range of options as early as feasible. If taxable personal income data are to be used in an aid ratio formula for apportioning $2.5 billion, greater accuracy is required than would be true for a low-income correction formula which only allocates $1 or $2 million. For example, if the latter approach is used, the State might not have to determine the borough in which each New York City taxpayer resides.

Some of the reasons why processing of the data are costly follow:

- Manual auditing for accuracy of the taxpayer's school district code. Currently, it is not possible to verify a school district code by keying a taxpayer's address to a pre-established computer program. No complete listing of addresses by school district exists. Also, there is no central depository of detailed maps of school districts in New York State.

- Missing data from 1977 income tax returns. School district code information is missing from 485,000 of the first 4.4 million returns processed by the New York State Department of Taxation and Finance. Since the rate of response completion was the highest among taxpayers who filed early returns, the proportion of non-compliance with the school district code requirement is expected to increase as the last group of 2.5 million returns are processed.

-- Lack of addresses for taxpayer residence. New York State taxpayers are not required to report the address which they claim as their domicile -- only their preferred mailing address (which may be a Post Office box, a work address, or the location of a financial adviser). Therefore, follow-up communication will be needed in a number of instances to ensure complete data collection.

What will be the results of using 1977 adjusted gross New York State taxable income as a wealth measure for apportioning $2.6 billion in formula operating aid to 705 school districts? Based on this study, the following assumptions appear to be valid:

-- Formula aid shifts will occur. Some districts will receive more aid; others, less.

-- New York City's formula operating aid would be less than it is today.

-- Counties which contain the State's largest cities would not receive as much formula aid as they do when full valuation is the wealth criterion.

-- Large suburban counties could not expect to receive as much of a formula aid increase as they would from use of 1970 U.S. Census personal income.

Each of these predictions about the impact of use of 1977 taxable income as the wealth criterion in New York State formula operating aid is discussed in this chapter.

FORMULA AID SHIFTS WILL OCCUR

If New York State retains its current aid ratio equation for the apportionment of operating aid, some districts will have formula aid increases as a result of using gross adjusted taxable income in the wealth measure. Others will have aid decreases.[1]

The purpose of an aid ratio is to ensure that a district of average wealth receives the same amount of formula operating aid each year if other formula components remain the same. Because taxable income is not distributed across the State in the same proportion as full valuation, districts will not retain their current aid ratios.

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[1] A cautionary note: total formula operating aid is not the same as payable operating aid as the discussion on pages 32-33 indicated.

For example, any resident measure using personal income as a criterion of wealth is expected to make the State's vacation areas appear poorer, in relation to the State average, than they do with a full valuation measure. Owners of vacation property are officially domiciled in other areas of the State. The current income measure would reflect all personal income in a taxpayer's school district of residence, while property valuation would reflect the total land values within the school district -- regardless of where the owners lived.

Even if the total amount of formula operating aid were to be increased by more than 10 percent, some districts would not receive as much aid as present should taxable income replace full valuation as the wealth measure in the operating aid formula.

In some states, the distribution of relative wealth among school districts may not matter in the apportionment of operating aid, but in New York it makes a great deal of difference because of the use of the State's aid ratio formula. With this aid ratio formula, any given wealth measure will allocate approximately the same amount of formula aid dollars -- all other factors being equal -- as any other wealth measure. Thus, formula aid shifts cannot be avoided if taxable personal income replaces either all or a portion of full valuation as the wealth measure in the current aid ratio equation.

The aid shifts reported in this study show the results of replacing full valuation with personal income as the sole wealth measure in the operating aid formula. However, predictions about combinations of income and full valuation may be developed from this study. For example, if calculations indicated a potential formula aid loss of 20 percent using one type of income data, then a wealth measure based 75 percent on full valuation and 25 percent on the same income data would produce a formula aid loss of five percent.

Instead of combining personal income and full valuation, another alternative would be to adopt a separate low-income correction formula. Under such a formula, special consideration might be given to districts in which average income per public school pupil differed in a measurable way from that of other districts with comparable tax bases. Local tax effort and district expenditure rates might also be considered in developing the criteria for such a correction formula. The current high tax aid formula, which will distribute about $13 million to 182 districts in the 1978-79 school year, could be regarded as a precedent for such a formula.

LOWER FORMULA AID FOR NEW YORK CITY

Currently, New York State taxable income is reported for the total State, New York City, and the 57 counties outside

New York City. School district boundaries are not coterminous with county lines, New York City excepted. Therefore, for purposes of discussion, the city illustrates the impact of the distribution of wealth within a county or within a city aided on a borough basis. Because of the use of flat grant guarantees and minimum aid ratios, total formula aid generated for New York City or for a county which currently receives flat grant aid will change according to fluctuations in the distribution of relative wealth among school districts in that area.

The distribution of income within New York State differs markedly depending on the year in which the data were collected and the type of wealth measure used, as Appendix Table B-1 indicates. For any given calendar year, the relative distribution of New York State taxable income is closer to the distribution of full valuation than for any other personal income measure. For example, in 1975 New York City's share of full valuation as used for public school aid purposes was 38.1 percent; of full valuation as computed for other uses, 38.8 percent; and of State taxable personal income, 38.4 percent. For 1976, the City's relative proportion decreased for all three measures and the relationship among them also changed: full valuation for school purposes, 36.7 percent; for other purposes, 37.3 percent; and State taxable personal income, 37.4 percent.

How significant is a change in New York City's relative share of the State wealth base from 36.7 percent of the total State to 38.1 percent -- an increase of about 3.8 percent? Because 1975 and 1976 full valuation data are both available on a school district basis, a computer estimate was prepared. Assuming all other factors remain constant, a formula operating aid decrease from $688 million to $667 million (3.1 percent) would occur for New York City if 1975 full valuation replaced 1976 full valuation as the wealth measure for computation of 1978-79 aid. Increases in the relative share of the State's full valuation also produced similar aid losses for the other Big Five cities. (See Appendix Table B-2.)

Thus, if New York City's share of the State's relative wealth only increased from 36.7 percent (1976 full valuation for school purposes) to 37.4 percent (1976 State taxable personal income), an aid shift could be predicted. Would this aid shift be proportional to the relative change in the City's share of the total wealth base -- i.e., in the vicinity of 1.9 percent? Available data indicate that the total formula aid loss would be more than 10 percent, even though the City's overall share of the State's wealth base is only 1.9 percent higher when 1976 taxable income replaces 1976 full value.

Prior to 1977, New York City taxable income was not collected by borough. Therefore, two separate hypotheses have been used to estimate the possible impact upon New York City if

1976 taxable personal income were used as the wealth measure and all other factors in the 1978-79 operating aid formula were retained. The first assumes that the 1976 taxable income distribution by borough is similar to that of the 1970 Census distribution; the second, that the 1976 taxable income distribution by borough is similar to that of the 1975 New York State Department of Commerce distribution. Both are shown in Table 10. Under the first assumption, New York City's formula aid loss would be 12.9 percent -- with only a 1.9 percent increase in the City's share of the State wealth base. Under the second assumption, the aid loss would equal 11.8 percent.

-- If 1976 taxable income is distributed among New York City's five boroughs on the same proportional basis as 1970 U.S. Census personal income, New York City's total formula operating aid would drop from $688 million (the 1978-79 formula aid total with full valuation) to $599 million, a 12.9 percent decrease.

-- If the basis for the distribution of taxable income among the City's five boroughs was the same as for the 1975 personal income data reported by the State Commerce Department, the City's aid total would be approximately $607 million -- $81 million (11.8 percent) below the 1978-79 current law formula operating aid total of $688 million.

Even though New York City's share of the total State relative wealth is less with 1976 State taxable personal income (37.4 percent) than with 1975 full valuation (38.1 percent), it would probably receive less formula operating aid with use of taxable income as a comparison of Appendix Table B-2 and Table 10 would suggest. This aid reduction occurs because of the nature of the borough operating aid formula and the three formula aid options available to districts.

As Manhattan's share of the total City wealth declines from the current 35 percent (1976 full valuation) to either 27 percent (1970 Census personal income) or 28 percent (1975 State Commerce Department personal income), it means greater relative wealth for other boroughs. With use of all three wealth measures, the City would still receive only $360 per pupil in formula operating aid for the pupils from Manhattan, or a total of $53 million for the 1978-79 school year. When Staten Island's share of the aggregate city wealth is cut by 45 percent -- the result of replacing 1976 full value with 1976 taxable income distributed on the basis of 1975 Commerce Department personal income, 1978-79 formula aid for this borough increased from $20.5 million to $46.3 million. However, with this same wealth base change, the aid generated for each of the two largest boroughs would decline markedly -- from $216 million to

(Text continues on page 50)

TABLE 10

1978-79 FORMULA OPERATING AID TO NEW YORK CITY BOROUGHS UNDER FOUR ALTERNATIVE WEALTH MEASURES: 1976 FULL VALUATION, 1970 U.S. CENSUS PERSONAL INCOME, AND TWO HYPOTHESES ON BOROUGH DISTRIBUTION OF 1976 NEW YORK STATE TAXABLE INCOME

Alternate Wealth Bases	City Total	Borough Formula Operating Aid				
		Manhattan	Bronx	Brooklyn	Queens	Staten Island
	(Dollar amounts are in thousands)					
1976 Full Valuation						
Full Value Amount	$74,604,759[a]	$26,103,802	$6,307,911	$16,027,032	$21,291,367	$4,973,837
Percentage of Total	100.00%	34.99%	8.46%	21.48%	28.54%	6.67%
Tier 1 Aid Ratio	.377	.000	.737	.617	.257	.247
1978-79 Formula Aid	$ 688,442[b]	$ 52,664	$ 215,583	$ 311,485	$ 88,208	$ 20,502
1970 U.S. Census Personal Income						
Income Amount	$29,350,972	$ 8,054,187	$4,289,225	$ 7,964,516	$ 8,010,184	$1,032,861
Percentage of Total	100.00%	27.44%	14.61%	27.14%	27.29%	3.52%
Tier 1 Aid Ratio	.258	.000	.456	.421	.151	.525
1978-79 Formula Aid	$ 521,898[b]	$ 52,664	$ 131,553	$ 209,962	$ 85,189	$ 42,532
1976 NYS Taxable Income (if Borough % Distribution like 1970 Census)[c]						
Income Amount	$31,901,000	$ 8,753,634	$4,660,736	$ 8,657,931	$ 8,705,783	$1,122,915
Percentage of Total	100.00%	27.44%	14.61%	27.14%	27.29%	3.52%
Tier 1 Aid Ratio	.361	.000	.533	.502	.271	.592
1978-79 Formula Aid	$ 599,171[b]	$ 52,664	$ 154,357	$ 251,647	$ 92,438	$ 48,065
1976 NYS Taxable Income (if Borough % Distribution like 1975 Commerce Income)[d]						
Income Amount	$31,901,000	$ 9,037,553	$4,529,942	$ 8,603,700	$ 8,552,658	$1,180,337
Percentage of Total	100.00%	28.33%	14.20%	26.97%	26.81%	3.70%
Tier 1 Aid Ratio	.361	.000	.546	.505	.283	.571
1978-79 Formula Aid	$ 606,950[b]	$ 52,664	$ 158,264	$ 253,197	$ 96,520	$ 46,305

Footnotes a to d appear on page 49.

FOOTNOTES

TABLE 10

a This full value total was computed by summing data reported for the five boroughs. It differs from the citywide total full value as shown in Table 5 of the text. Both estimates were obtained from the State Education Department.

b Total formula aid for New York City is the sum of the formula aid generated for the five boroughs. This computational method is available to the City under current law.

c The 1976 taxable income of New York State residents, as reported by the New York State Department of Taxation and Finance, was distributed among the city's five boroughs on the same basis as 1970 U.S. Census personal income. Total formula operating aid was then computed for each borough.

d The methodology was identical to that used above except that the distribution of 1975 N.Y. State Commerce personal income was the allocation criterion instead of 1970 U.S. Census personal income. For 1975, New York State Commerce personal income equals $50.67 billion for New York City with a borough allocation as follows: Manhattan, $14.36 billion (28.33 percent); Bronx, $7.20 billion (14.20 percent); Brooklyn, $13.66 billion (26.97 percent); Queens, $13.58 billion (26.81 percent); and Staten Island, $1.87 billion (3.7 percent).

$158 million in the Bronx and from $311 million to $253 million in Brooklyn. With use of income data both Bronx and Brooklyn appear wealthier than they do when full valuation is used in the 1978-79 operating aid formula.

These shifts make it obvious that any wealth formula using New York State taxable personal income must be based on accurate data from the five boroughs of New York City -- as well as other parts of the State.

PROBABLE TOTAL AID LOSSES FOR CERTAIN URBAN COUNTIES

Because only full valuation as used for public school aid apportionment is computed by school district, it is not possible to compare full valuation data with county data summed on a geographic basis. As a proxy, full valuation data as used for other purposes were compared with 1975 taxable income data as reported by county.

The results of this analysis are shown in Appendix Table B-3. They support the findings reported in the third chapter on the impact of use of 1970 U.S. Census personal income as the wealth measure.

Eleven counties in New York State have a 1970 population of more than 140,000 and at least one city with a population of more than 38,000. (All of these counties are listed in Table 9 on page 39.) For each of these counties, except Chautauqua[2], their share of New York State's 1975 full valuation is less than their share of 1975 New York State taxable income. Thus, it is assumed that use of taxable income will not generate as much total formula aid as full valuation would for most of these 10 large counties. When 1977 taxable income data are available by school district, it will be important to examine the types of aid shifts produced for the State's larger cities and their surrounding suburbs.

The six other counties in the group of 17 largest counties have been selected for more intensive analysis and are shown in Table 11. In each county, except Nassau, the relative share of full valuation exceeded the relative share of taxable income in either 1975 or 1976. Further, Dutchess County is the only one of the five in which this trend was not present in both years. However, because of the differences in income definitions, changes in economic conditions since 1969, or other factors, all six counties have a greater share of the State's total 1976 taxable income than of 1970 Census personal income.

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[2] Chautauqua is one of the smallest of the 17 largest counties and Jamestown, one of the smallest of the 17 largest cities. The county had a 1970 population of 147,305 and the city, a population of 39,795.

TABLE 11

COMPARISON OF FORMULA AID INCREASES WHEN 1970 CENSUS PERSONAL INCOME REPLACES 1976 FULL VALUATION AND COUNTY SHARE OF FIVE ALTERNATIVE WEALTH BASES, SIX SELECTED LARGE COUNTIES

		Share of Alternative Wealth Bases (As a Percent of Total State)				
		Full Valuation		1970 U.S. Census Income[b]	NYS Taxable Income	
Area	Formula Aid Increase When 1970 U.S. Census Personal Income Replaces 1976 Full Valuation[a]	1975[b]	1976[c]		1975[b]	1976[d]
Selected Counties		25.27%	25.24%	19.93%	23.19%	23.26%
Dutchess	19.38%	1.28	1.41	1.12	1.34	1.34
Nassau	7.33	10.69	10.64	10.08	11.09	11.01
Orange	25.75	1.59	1.65	1.03	1.20	1.22
Rockland	47.25	2.07	2.06	1.31	1.64	1.66
Suffolk	24.50	8.76	9.03	5.74	7.21	7.32
Ulster	37.21	0.88	0.95	0.65	0.71	0.71
Rest of State		74.73%	74.26%	80.07%	76.81%	76.74%
TOTAL STATE	-0.01%	100.00%	100.00%	100.00%	100.00%	100.00%

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[a] Data reported on Appendix Table A-6. All 1978-79 formula factors were held constant except for the wealth base.

[b] Data reported on Appendix Table B-3.

[c] Computed from New York State Board of Equalization and Assessment State Equalization Table for the Year 1976, September 1977.

[d] Computed from New York State Personal Income Tax: Number of Returns, Total Income, and Tax Liability by County of Residence, Income Year 1976, November, 1977 New York State Department of Taxation and Finance.

Thus, since their proportion of 1976 taxable income is higher than it was for 1970 U.S. Census personal income, use of taxable income would probably produce less formula aid than use of 1970 Census income in each of the suburban counties.

Nassau is the only one of the six suburban counties shown in Table 11 in which the proportion of 1975 and 1976 full valuation is less than its respective share of both 1975 and 1976 taxable income. However, for Nassau County not even the use of 1970 Census personal income produces a formula aid total which equals the County's 1978-79 payable operating aid level. (The reason is that manv of the Nassau districts are aided on a saveharmless basis after more than a decade of declining school district enrollments.)

SUMMARY

Because it is possible to predict some of the trends which will occur if New York State taxable income is used as a wealth measure, it is important to have an early and thorough discussion of the alternative ways of using income to apportion public school aid.

The purpose of this study has been to assess the impact of using personal income in determining the wealth of New York State school districts. The previous chapter describes the types of aid shifts which would occur among the State's 705 major school districts if 1970 U.S. Census personal income data replaced 1976 full valuation as the wealth measure for the computation of formula operating aid for the 1978-79 school year. Because of limitations in the Census data, the findings are suggestive rather than definitive. Nevertheless, the general direction of the aid shifts is clear.

The comparisons presented in this chapter show that major shifts in aid would also occur if 1976 New York State taxable income replaced 1976 full valuation as the wealth measure for the 1978-79 school year. For example, New York City's formula aid loss, if such a shift occurred, would appear to be greater than 10 percent. Some of the wealthiest school districts -- particularly those located in vacation areas -- would have substantial operating aid increases.

In view of the direction of the shifts in operating aid and the State's policy of distributing aid to public school districts in inverse proportion to local taxable wealth, personal income will not be acceptable as a total substitute for full valuation as the measure of a school district's wealth. These findings also suggest that before New York State taxable personal income is used in a composite wealth index for the apportionment of $2.5 billion in operating aid or for other less costly formulas, viable combinations of full value and income need to be examined within different formula options.

Before taxable income can be used for any purpose in New York State school aid legislation, the school district information received on tax returns will need to be audited to verify that school district codes are correct, to retrieve missing data, and to check the addresses supplied by large taxpayers. The cost of obtaining and processing accurate income data by school district is high, but essential, if these data are to be used to apportion $2.5 billion in operating aid. However, processing costs might be reduced if only a limited number of districts were to receive a small amount of additional aid on the basis of their relative income per pupil. In the latter case, less accuracy might be tolerated for areas of the State in which no district appeared to qualify for the proposed low income formula. The cost-benefit question will need to be addressed as researchers begin to experiment with alternative uses for the taxable income data.

APPENDIX A: STATISTICAL TABLES

Text references to the tables in Appendix A are found in the third chapter of this report, Two Bases for Measuring School District Wealth.

All of the statistical data which are reported in this Appendix and which relate to 1978-79 current law formula factors are based on a district-by-district computer tape of March 20, 1978 supplied to the New York State Budget Division by the State Education Department. This tape was adjusted to reflect major data changes reported on State Education Department computer runs of April 11, 1978 and on May 11, 1978; the latter run just provided data on New York City aid.

All footnotes for tables in this Appendix appear at the bottom of the table or on the page immediately following the table.

APPENDIX TABLE A-1

METHODOLOGY FOR COMPUTATION OF AID RATIO FORMULA USED WHEN THE WEALTH MEASURE IS 1976 FULL VALUATION, 1975 FULL VALUATION, OR 1970 U.S. CENSUS PERSONAL INCOME

Aid Ratio Formula	1976 Full Valuation[a]	1975 Full Valuation[b]	1970 Census Personal Income[c]
Tier 1[d]	$1.000 - \left[\frac{\text{Dist. FV/WTAPU}^{e}}{\$59{,}000^{f}} \times .51\right]$	$1.000 - \left[\frac{\text{Dist. FV/WTAPU}^{e}}{\$55{,}100^{f}} \times .51\right]$	$1.000 - \left[\frac{\text{Dist. Income/WTAPU}^{e}}{\$19{,}450^{f}} \times .51\right]$
Tier 2[d]	$1.000 - \left[\frac{\text{Dist. FV/WTAPU}^{e}}{\$59{,}000^{f}} \times .80\right]$	$1.000 - \left[\frac{\text{Dist. FV/WTAPU}^{e}}{\$55{,}100^{f}} \times .80\right]$	$1.000 - \left[\frac{\text{Dist. Income/WTAPU}^{e}}{\$19{,}450^{f}} \times .80\right]$

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[a] Total State full valuation for 1976 as used for State public school aid calculation purposes in the 1978-79 school year is $203.3 billion.

[b] Total State full valuation for 1975 as used for State public school aid calculation purposes in the 1977-78 school year is $192.3 billion.

[c] Total 1970 U.S. Census personal income as used for State aid calculation purposes in this report is $66.1 billion.

[d] Maximum aid ratio is .900.

[e] Individual district wealth per pupil. District WTAPU (wealth total aidable pupil units) for 1978-79 operating aid apportionment (i.e., 1976-77 school year pupil counts) were used as the divisor in all three measures.

[f] State average wealth per pupil. Total State WTAPU (wealth total aidable pupil units) for the 1976-77 school year were used as the divisor in all three wealth per pupil computations.

APPENDIX TABLE A-2

COMPARISON OF APPROVED OPERATING EXPENSE PER PUPIL, 1978-79 FORMULA OPERATING AIDS PER PUPIL BASED ON 1976 FULL VALUATION PER PUPIL (FV/WTAPU) AND 1970 U.S. CENSUS PERSONAL INCOME PER PUPIL (INCOME/WTAPU), 15 SAMPLE NEW YORK STATE SCHOOL DISTRICTS

Selected District (With Number of Pupils)	1977-78 Approved Operating Expense/ Pupil[a] (1)	FV/ WTAPU[b] Tier I Aid Ratio[c] (2)	Income/ WTAPU[d] Tier I Aid Ratio (3)	Per Pupil Yield of $13/1,000 Full Value Tax Rate[e] (4)	1978-79 Formula Operating Aid Per Pupil[f] With FV/TAPU (5)	1978-79 Formula Operating Aid Per Pupil[f] With Income/ TAPU (6)	Per Pupil Expense Level Possible With Formula Aid and $13/1,000 FV Tax Rate[g] FV/TAPU Aid (7)	Per Pupil Expense Level Possible With Formula Aid and $13/1,000 FV Tax Rate[g] Income/ TAPU Aid (8)
5 Wealthiest Districts With Over 500 Pupils[h]								
East Hampton (1,701)[i]	$ 2,795	.000	.545	$4,150	$ 360	$ 804	$4,510	$4,954
South Hampton (1,793)	2,286	.000	.517	3,213	360	761	3,573	3,974
Hendrick Hudson (3,137)	2,756	.000	.671	2,791	360	997	3,151	3,788
Town of Webb (572)	2,018	.000	.800	2,622	360	1,194	2,982	3,816
Downsville (554)	1,897	.000	.714	2,555	360	1,062	2,915	3,617
5 Largest Districts[j]								
New York City (968,840)	2,163	.378	.261	936	707	598[l]	1,643	1,474
Buffalo (55,661)	1,871	.614	.349	580	910	506	1,490	1,086
Rochester (40,991)	2,195	.499	.404	754	734	588	1,488	1,342
Yonkers (26,673)	2,067	.274	.160	1,093	397	360	1,490	1,453
Syracuse (25,638)	1,649	.560	.354	662	827	513	1,489	1,175
5 Poorest Districts[k]								
Salmon River (1,927)	1,504	.900	.863	147	1,347	1,290	1,494	1,437
Brasher Falls (1,852)	1,322	.857	.853	216	1,242	1,236	1,458	1,452
Stockbridge Valley (908)	1,321	.852	.820	223	1,235	1,189	1,458	1,412
Brushton Moira (1,224)	1,180	.846	.819	232	1,226	1,187	1,458	1,419
Madrid Waddington (1,472)	1,341	.843	.816	236	1,222	1,183	1,458	1,419
TOTAL STATE	$ 1,949[m]	.490[n]	.490[o]	$ 767	$ 789[p]	$ 789[p]	$1,556	$1,556

FOOTNOTES

TABLE A-2

a 1977-78 approved operating expense per pupil was computed by dividing a district's estimated approved operating expense for 1977-78 by its estimated 1977-78 total aidable pupil units (TAPU).

The counties in which the 15 sample districts are located are listed below:

-- East Hampton, Suffolk County; South Hampton, Suffolk County; Hendrick Hudson, Westchester County; Town of Webb, Herkimer County; Downsville, Delaware County.

-- New York City, Bronx, Kings, New York, Queens, and Richmond Counties; Buffalo, Erie County; Rochester, Monroe County; Yonkers, Westchester County; Syracuse, Onondaga County.

-- Salmon River, Franklin County; Brasher Falls, St.Lawrence County; Stockbridge Valley, Madison County; Brushton Moira, Franklin County; Madrid Waddington, St. Lawrence County.

b 1976 full value per 1976-77 wealth total aidable pupil units (FV/WTAPU) will be the basis for operating aid apportionment in the 1978-79 school year. These amounts according to the New York State Education Department are:

East Hampton	$319,291	New York City	$72,011	Salmon River	$11,319
South Hampton	247,184	Buffalo	44,672	Brasher Falls	16,624
Hendrick Hudson	214,699	Rochester	58,026	Stockbridge Valley	17,215
Town of Webb	201,717	Yonkers	84,122	Brushton Moira	17,859
Downsville	196,614	Syracuse	50,999	Madrid Waddington	18,224

c Tier I aid ratios are based on the first tier operating aid ratio formula for 1978-79 aid.

$$1.000 - \left[\frac{\text{Dist. Wealth per pupil}}{\text{State Average Wealth Per Pupil}} \times .51\right]$$

Districts with aid ratios between .000 and .256 would receive aid under the flat grant and taper formulas, with amounts ranging from $360 to $375 per pupil. For more information on the wealth per pupil ranges associated with each of the two ratio types, see Table 6 on page 28 of the text.

TABLE A-2 FOOTNOTES (continued)

d 1970 U.S. Bureau of the Census personal income per wealth total aidable pupil units (Income/WTAPU). 1970 Census Bureau personal income per pupil figures for each district:

East Hampton	$17,394	New York City	$28,314	Salmon River	$5,233
South Hampton	18,462	Buffalo	24,850	Brasher Falls	5,645
Hendrick Hudson	12,586	Rochester	22,747	Stockbridge Valley	6,894
Town of Webb	7,682	Yonkers	32,079	Brushton Moira	6,914
Downsville	10,926	Syracuse	24,673	Madrid Waddington	7,023

e The amount of money per pupil a district could raise using a $13.00 per thousand full value tax rate assuming that the tax yield was to be measured against 1976 full valuation.

f Operating aid per pupil was calculated for each district using full value and personal income as the wealth measures. The amount of aid per pupil is derived from the product of the district's Tier 1 aid ratio and $1,450 plus any Tier 2 aid for which the district is eligible. (See explanation on pages 25-26 of the text.)

g The per pupil funding level possible if 1978-79 State formula operating aid is combined with the yield of a local full value tax rate of $13 per thousand (i.e., columns 4 and 5 or columns 4 and 6).

h There are 13 other districts with over $196,614 FV/pupil, but each of them has fewer than 500 pupils.

i The number of pupils used for 1978-79 formula operating aid apportionment are 1977-78 total aidable pupil units (TAPU).

j The five districts with the largest numbers of pupils.

k The State's poorest districts when using 1976 full value as the wealth measure. Each of these districts has more than 500 pupils as the table indicates.

l Aid ratios for New York City are computed on a city-wide basis, but the operating aid amounts are generated on a borough basis using separate aid ratios for each borough.

m The State average operating expense per pupil for the 1977-78 school year.

n The State average used for the calculation of the 1978-79 FV/WTAPU aid ratios is $59,000.

TABLE A-2 FOOTNOTES (continued)

o The State average used for 1970 U.S. Census personal income wealth total aidable pupil units is $19,450.

p This number reflects the total amount of 1978-79 formula operating aid generated for each option divided by the total number of pupils in the State (1977-78 TAPU).

APPENDIX TABLE A-3

COMPARISON OF PERCENTAGE OF TOTAL STATE PUPILS WITH PERCENTAGES OF TOTAL STATE 1978-79 FORMULA AID GENERATED USING 1976 FULL VALUE PER PUPIL (FV/WTAPU) AND 1970 U.S. CENSUS INCOME PER PUPIL (INCOME/WTAPU), BIG FIVE CITIES, OTHER LARGE CITIES, AND REST OF STATE

Area	Number of Pupils (TAPU for 1978-79 Aid)[a]	Percent of Total State	Formula Operating Aid (FV/WTAPU)[b]	Percent of Total State	Formula Operating Aid (Income/WTAPU)[c]	Percent of Total State
			-----(dollar amounts in thousands)----			
Big Five Cities	1,117,803	34.01%	$801,223	30.91%	$597,105	23.04%
New York City	968,840	29.48	688,442	26.56	521,898	20.13
Buffalo	55,661	1.69	50,792	1.96	28,242	1.09
Rochester	40,991	1.25	30,181	1.16	24,145	0.93
Syracuse	25,638	0.78	21,213	0.82	13,159	0.51
Yonkers	26,673	0.81	10,595	0.41	9,661	0.38
Other Large Cities[d]	127,650	3.88%	$103,519	3.99%	$84,434	3.26%
Albany	10,441	0.32	3,928	0.15	3,751	0.14
Binghamton	9,675	0.29	8,793	0.34	6,529	0.25
Elmira	11,939	0.36	12,069	0.47	11,102	0.43
Jamestown	7,726	0.24	8,357	0.32	6,975	0.27
Mt. Vernon	11,884	0.36	9,153	0.35	6,247	0.24
New Rochelle	11,294	0.34	4,471	0.17	4,085	0.16
Niagara Falls	14,517	0.44	13,400	0.52	11,774	0.45
Schenectady	11,183	0.34	8,734	0.34	6,900	0.27
Rome	10,827	0.33	11,812	0.46	10,210	0.39
Troy	7,038	0.21	6,963	0.27	4,930	0.19
Utica	12,690	0.39	12,802	0.49	8,894	0.35
White Plains	8,436	0.26	3,037	0.12	3,037	0.12
Rest of State	2,041,022	62.10%	$1,687,694	65.10%	$1,910,587	73.71%
TOTAL STATE	3,286,475	100.00%	$2,592,436	100.00%	$2,592,128	100.00%

FOOTNOTES

TABLE A-3

a The number of pupils used for 1978-79 formula operating aid computation under current law are 1977-78 total aidable pupil units (TAPU).

b 1978-79 formula operating aid based on Full Value/Wealth TAPU (FV/WTAPU) is the total aid generated by the current operating aid formula using the current per pupil wealth measure.

c 1978-79 formula operating aid based on 1970 U.S. Census personal income/Wealth TAPU (Income/ WTAPU) is the total aid generated by the current operating aid formula when income is substituted for full value in the current per pupil wealth measure.

d Other large cities include the 12 New York State cities which had 1970 U.S. Census population totals ranging from 38,000 to 124,999. Cities with a population of 125,000 or more are in the "Big Five" category.

APPENDIX TABLE A-4

COMPARISON OF AID RATIOS AND 1978-79 FORMULA OPERATING AID USING FULL VALUE PER PUPIL AND U.S. CENSUS PERSONAL INCOME PER PUPIL AS THE WEALTH MEASURE IN THE CURRENT 1978-79 FORMULA, BIG FIVE CITIES, OTHER LARGE CITIES, AND REST OF STATE

Area	Number of Pupils (TAPU for 1978-79 Aid)[a]	Tier I Aid Ratios for 1978-79 Aid[b]		1978-79 Formula Operating Aid			
						Difference between use of FV/WTAPU and Income/WTAPU	
		FV/WTAPU	Income/WTAPU	Based on FV/WTAPU[c]	Based on Income/WTAPU[c]	Amount	Percent
	(dollar amounts in thousands)						
Big Five Cities	1,117,803			$801,223	$597,105	$-204,118	-25.48%
New York City	968,840	.378[d]	.261[d]	688,442	521,898	-166,544[d]	-24.19[d]
Buffalo	55,661	.615	.349	50,792	28,242	- 22,550	-44.40
Rochester	40,991	.500	.404	30,181	24,145	- 6,036	-20.00
Syracuse	25,638	.560	.354	21,213	13,159	- 8,054	-37.97
Yonkers	26,673	.274	.160	10,595	9,661	- 934	- 8.82
Other Large Cities[e]	127,650			$103,519	$ 84,434	$- 19,085	-18.44%
Albany	10,441	.260	.000	3,928	3,751	- 177	- 4.51
Binghamton	9,675	.614	.461	8,793	6,529	- 2,263	-25.74
Elmira	11,939	.681	.628	12,069	11,102	- 967	- 8.01
Jamestown	7,726	.727	.610	8,357	6,975	- 1,383	-16.55
Mt. Vernon	11,884	.514	.349	9,153	6,247	- 2,906	-31.75
New Rochelle	11,294	.272	.111	4,471	4,085	- 386	- 8.63
Niagara Falls	14,517	.623	.550	13,400	11,774	- 1,626	-12.13
Schenectady	11,183	.530	.423	8,734	6,900	- 1,834	-21.00
Rome	10,827	.753	.651	11,812	10,210	- 1,602	-13.56
Troy	7,038	.683	.484	6,963	4,930	- 2,033	-29.20
Utica	12,690	.696	.484	12,802	8,894	- 3,908	-30.53
White Plains	8,436	.000	.098	3,037	3,037	0	0.00
Rest of State	2,041,022			$1,687,694	$1,910,589	$+222,895	+13.21%
TOTAL STATE	3,286,475			$2,592,436	$2,592,128	$- 308	- 0.01%

FOOTNOTES

TABLE A-4

a The number of pupils used for 1978-79 formula operating aid are 1977-78 total aidable pupil units (TAPU).

b Tier 1 aid ratios are based on the first tier operating aid ratio formula for 1978-79 aid:

$$1.000 - \left[\frac{\text{District wealth per pupil}}{\text{State average wealth per pupil}}\right] \times .51$$

Districts with aid ratios of .126 or less would receive aid under the $360 per pupil flat grant provision. Districts with aid ratios between .126 and .256 would receive aid under the taper formula ranging from $360 to $375 per pupil. Aid ratios were computed using the current wealth measure (FV/Wealth TAPU) and then substituting income in place of full value in the per pupil measure (Income/ Wealth TAPU).

c Formula operating aid is the product of the district's formula aid per pupil and its TAPU. Two formula amounts are shown -- one using full valuation per pupil and one using 1970 U.S. Census personal income per pupil as the measure of wealth with all other formula factors held constant.

d Aid ratios for New York City shown in this table are computed on a city-wide basis. However, the formula operating aid amounts are generated on a borough basis using separate aid ratios for each borough.

e Other large cities include the 12 New York State cities which had 1970 U.S. Census population totals ranging from 38,000 to 124,999. Cities with a population of 125,000 or more are in the "Big Five" category.

APPENDIX TABLE A-5

COMPARISON OF WEALTH PER PUPIL AND 1978-79 FORMULA OPERATING AID USING 1976 FULL VALUATION AND 1970 U.S. CENSUS PERSONAL INCOME AS WEALTH MEASURES BY TYPE OF DISTRICT WITHIN NEW YORK STATE STANDARD METROPOLITAN STATISTICAL AREAS (SMSAs), REST OF STATE, AND TOTAL STATE

Area and Type of District[a]	Number of Pupils (TAPU)[b]	Approved Operating Expense/ Pupil[c]	Wealth Per Pupil		Total Formula Operating Aid	
			FV/ WTAPU[d]	Income/ WTAPU[e]	FV/ WTAPU[f]	Income/ WTAPU[g]
					--(amounts in thousands)---	
Albany-Schenectady-Troy SMSA	155,640	$1,513	$48,239	$16,531	$134,175	$134,792
Albany	10,441	1,788	85,629	39,731	3,928	3,751
Schenectady	11,183	1,681	54,490	22,034	8,734	6,900
Troy	7,038	1,407	36,784	19,687	6,963	4,930
Other Cities	18,874	1,370	41,463	30,288	17,721	16,319
Suburbs	108,104	1,499	45,883	13,636	96,829	102,892
Binghamton SMSA	63,409	$1,444	$37,497	$13,012	$ 62,966	$ 61,307
Binghamton	9,675	1,680	44,726	20,565	8,793	6,529
Suburbs	53,734	1,415	36,200	11,659	54,174	54,778
Buffalo SMSA	252,926	$1,629	$46,121	$17,610	$226,599	$204,134
Buffalo	55,661	1,871	44,672	24,850	50,792	28,242
Other Cities	38,776	1,699	44,980	16,256	35,047	32,875
Suburbs	158,489	1,565	46,895	15,597	140,760	143,016
Elmira SMSA	20,725	$1,488	$40,019	$12,787	$ 20,043	$ 20,322
Elmira	11,939	1,615	37,025	14,223	12,069	11,102
Suburbs	8,786	1,432	44,005	10,875	7,973	9,220
New York City SMSA	1,824,505	$2,129	$70,724	$23,726	$1,269,744	$1,217,805
New York City	968,840	2,163	72,011	28,314	688,442	521,898
Yonkers	26,673	2,068	84,122	32,079	10,595	9,661
Other Cities	49,074	2,222	81,883	29,179	26,067	22,054
Suburbs	779,918	2,195	68,036	17,532	544,640	664,192

APPENDIX TABLE A-5 (Continued)

Area and Type of District[a]	Number of Pupils (TAPU)[b]	Approved Operating Expense/ Pupil[c]	Wealth Per Pupil		Total Formula Operating Aid	
			FV/ WTAPU[d]	Income/ WTAPU[e]	FV/ WTAPU[f]	Income/ WTAPU[g]
					--(amounts in thousands)---	
Poughkeepsie SMSA	54,122	$1,574	$52,486	$13,402	$ 43,067	$ 51,413
Poughkeepsie	4,859	1,811	50,821	22,272	4,022	2,954
Other Cities	3,418	1,426	56,593	20,182	2,568	2,366
Suburbs	45,844	1,592	52,364	11,960	36,477	46,094
Rochester SMSA	208,832	$1,666	$50,680	$15,781	$ 172,914	$ 181,017
Rochester	40,991	2,196	58,026	22,747	30,181	24,145
Other Cities	7,535	1,451	46,857	8,352	6,579	8,689
Suburbs	160,356	1,586	49,011	14,352	136,153	148,183
Syracuse SMSA	146,791	$1,479	$42,029	$13,901	$ 140,512	$ 137,514
Syracuse	25,638	1,650	50,999	24,673	21,213	13,159
Other Cities	14,234	1,540	70,405	12,346	10,710	14,111
Suburbs	106,919	1,446	36,182	11,532	108,589	110,244
Utica-Rome SMSA	72,124	$1,326	$33,631	$13,373	$ 75,169	$ 68,001
Utica	12,690	1,418	35,291	19,702	12,802	8,894
Rome	10,827	1,321	28,719	13,349	11,812	10,210
Other Cities	5,129	1,329	34,045	12,837	5,285	4,952
Suburbs	43,478	1,295	34,306	11,570	45,270	43,945
Rest of State	487,401	$1,439	$44,903	$10,735	$ 447,247	$ 515,823
Cities	114,539	1,539	44,781	14,572	103,217	104,169
Non-City Districts	372,862	1,408	44,941	9,549	344,030	411,654
TOTAL STATE	3,286,475	$1,949	$59,000	$19,450	$2,592,436	$2,592,128

FOOTNOTES

TABLE A-5

a The data in this table are presented by the nine standard metrpolitan statistical areas (SMSA) in New York State. All other districts in counties outside the SMSAs are included in Rest of State. Central cities which appear individually, other cities, and suburban districts are shown for each SMSA.

b The number of pupils used for 1978-79 formula aid are 1977-78 total aidable pupil units (TAPU).

c Approved operating expense per pupil (TAPU) for the 1977-78 school year.

d Full value per Wealth TAPU (FV/WTAPU) is the 1976-77 wealth measure, used for 1978-79 aid under present statutes.

e Income per Wealth TAPU (Income/WTAPU) uses 1970 Census income and the same wealth TAPU as in present statutes for 1978-79 aid.

f 1978-79 formula operating aid based on Full Value/Wealth TAPU (FV/WTAPU) is the total aid generated by the current operating aid formula using the current per pupil wealth measure (FV/WTAPU). Subtotals may not add due to rounding.

g 1978-79 operating aid based on 1970 U.S. Census personal income/Wealth TAPU (Income/WTAPU) is the total aid generated by the current operating aid formula when income is substituted for full value in the current per pupil wealth measure (Income/WTAPU). Subtotals may not add due to rounding.

APPENDIX TABLE A-6

COMPARISON OF 1978-79 FORMULA OPERATING AIDS COMPUTED USING 1976 FULL VALUATION PER PUPIL (FV/WTAPU) AND 1970 U.S. CENSUS PERSONAL INCOME PER PUPIL (INCOME/WTAPU), 17 LARGEST COUNTIES, NEW YORK CITY, AND REST OF STATE

Area	No. of Pupils (TAPU for 1978-79 Aid)[a]	1978-79 Formula Operating Aid		Difference	
		Based on FV/WTAPU[b]	Based on Income/WTAPU[c]	Amount[d]	Percent
		--------(dollar amounts in thousands)------------			
17 Largest Counties[e]	1,724,674	$1,337,829	$1,438,643	$+100,814	+ 7.54%
Albany	47,086	31,928	34,129	+ 2,201	+ 6.89
Broome	50,051	48,420	46,842	- 1,578	- 3.26
Chautauqua	33,697	32,694	34,131	+ 1,437	+ 4.40
Dutchess	54,122	43,067	51,413	+ 8,346	+19.38
Erie	202,121	176,820	156,236	- 20,584	-11.64
Monroe	140,402	106,771	107,690	+ 919	+ 0.86
Nassau	278,729	164,319	176,367	+ 12,048	+ 7.33
Niagara	50,805	49,779	47,898	- 1,881	- 3.78
Oneida	55,861	58,284	51,858	- 6,426	-11.03
Onondaga	99,962	93,336	86,204	- 7,132	- 7.64
Orange	60,161	50,641	63,683	+ 13,042	+25.75
Rensselaer[f]	28,574	28,220	24,827	- 3,393	-12.02
Rockland[f]	55,977	34,162	50,304	+ 16,142	+47.25
Schenectady	28,905	23,328	22,261	- 1,067	- 4.57
Suffolk	339,866	292,656	364,366	+ 71,710	+24.50
Ulster	34,947	25,496	34,982	+ 9,486	+37.21
Westchester	163,408	77,908	85,452	+ 7,544	+ 9.68
New York City	968,840	688,442	521,898	-166,544	-24.19
Rest of State	592,961	566,165	631,587	+ 65,422	+11.55
TOTAL STATE	3,286,475	$2,592,436	$2,592,128	$- 308	- 0.01%

FOOTNOTES

TABLE A-6

a The number of pupils used for 1978-79 formula aid computation under current law are 1977-78 total aidable pupil units (TAPU).

b 1978-79 formula operating aid based on Full Value/Wealth TAPU (FV/WTAPU) is the total aid generated by the current operating aid formula using the current per pupil wealth measure (FV/WTAPU).

c 1978-79 formula operating aid based on 1970 U.S. Census personal income/Wealth TAPU (income/WTAPU) is the total aid generated by the current operating aid formula when income is substituted for full value in the current per pupil wealth measure (Income/WTAPU).

d The difference amount was computed by subtracting the Income/WTAPU formula operating aid from FV/WTAPU formula operating as shown in the two preceding columns.

e The 17 largest counties include all counties (exclusive of the 5 New York City boroughs) with a 1970 population of 140,000 or more.

f Data for the City of Rensselaer in Rensselaer County and Pearl River in Rockland County have been excluded from this table because 1970 U.S. Census personal income data were not available for either district.

APPENDIX TABLE A-7

COMPARISON OF BOCES REGION AVERAGE AID RATIOS COMPUTED USING 1970 U.S. CENSUS PERSONAL INCOME AND 1976 FULL VALUATION PER WEALTH TOTAL AIDABLE PUPIL UNIT

Area	No. of Pupils (1977-78 TAPU)[b]	Wealth Per Pupil		Tier 1 Aid Ratio[e]	
		FV/WTAPU[c]	Income/WTAPU[d]	FV/WTAPU	Income/WTAPU
BOCES Regions[a]					
Albany-Schenectady-Schoharie	87,611	$56,809	$19,208	.510	.497
Allegany	10,566	32,704	9,281	.718	.757
Broome	57,858	38,470	13,420	.668	.648
Cattaraugus-Erie-Wyoming	20,105	33,388	10,129	.712	.735
Cayuga	16,183	33,120	11,189	.714	.707
Chautauqua	33,697	39,815	11,994	.657	.685
Clinton-Essex	25,086	37,372	9,506	.678	.751
Cortland	11,114	39,245	10,890	.661	.714
Delaware-Chenango-Madison-Otsego	23,797	41,765	9,728	.640	.745
Dutchess	54,122	52,486	13,402	.547	.649
Erie #1	174,777	48,860	19,624	.578	.485
Erie #2	29,734	40,402	11,572	.652	.697
Franklin	13,708	40,229	8,824	.653	.768
Genesee-Wyoming	18,052	38,072	10,950	.671	.713
Greene #2-Delaware-Schoharie-Otsego	14,663	64,510	11,381	.443	.702
Hamilton-Fulton-Montgomery	23,548	40,954	12,743	.646	.666
Herkimer-Fulton-Hamilton	17,734	32,634	11,562	.718	.697
Jefferson-Lewis	29,506	35,826	10,013	.690	.737
Livingston-Steuben-Wyoming	19,566	39,748	10,979	.656	.712
Madison-Oneida	28,499	28,731	10,820	.752	.716
Monroe #1	99,038	57,720	20,419	.502	.464
Monroe #2	44,314	50,624	13,502	.562	.646
Nassau	278,729	74,834	22,812	.353	.402
Oneida-Hamilton-Herkimer	35,938	34,822	15,089	.699	.604
Onondaga-Madison	105,576	42,531	15,606	.633	.591

APPENDIX TABLE A-7 (Continued)

Area	No. of Pupils (1977-78 TAPU)[b]	Wealth Per Pupil		Tier 1 Aid Ratios[e]	
		FV/WTAPU[c]	Income/WTAPU[d]	FV/WTAPU	Income/WTAPU
Ontario-Seneca-Wayne-Yates	55,534	$41,669	$10,014	.640	.737
Orange-Ulster-Sullivan	62,464	55,605	10,848	.520	.715
Orleans-Niagara	58,518	38,145	13,436	.670	.648
Oswego	29,703	44,962	9,301	.611	.756
Putnam-Westchester #1	63,379	77,345	16,323	.331	.572
Rensselaer-Columbia	48,672	46,550	13,738	.599	.640
Rockland	55,968	68,549	15,131	.409	.603
St.Lawrence	28,453	32,155	9,448	.722	.752
Saratoga-Warren	36,465	37,961	9,506	.672	.751
Schuyler-Chemung-Tioga	28,665	37,464	11,884	.676	.688
Steuben-Allegany	26,271	35,858	10,657	.690	.721
Suffolk #1	21,535	180,920	13,516	.000	.646
Suffolk #2	182,970	43,072	8,987	.628	.764
Suffolk #3	135,297	50,713	12,889	.561	.662
Sullivan	12,935	85,334	11,504	.263	.699
Tompkins-Seneca-Tioga	18,676	49,355	14,178	.573	.628
Ulster	32,622	57,179	12,610	.506	.670
Washington-Warren-Hamilton	27,878	47,837	9,310	.586	.756
Westchester #2	117,692	92,223	31,260	.203	.180
New York City	968,840	72,011	28,314	.377	.258
TOTAL STATE	3,286,475[f]	$59,000	$19,450	----	----

FOOTNOTES

TABLE A-7

a Boards of Cooperative Educational Services (BOCES) are intermediate districts headed by a district superintendent and provide special educational programs and services to member districts. Districts which do not presently belong to a BOCES have been included in the BOCES region where they are located. New York City, which is not geographically located in a BOCES region, is treated as a separate district.

b Number of pupils are 1977-78 total aidable pupil units (TAPU) for 1978-79 operating aid apportionment under present statutes.

c Full value per Wealth TAPU (FV/WTAPU) is the 1976-77 wealth measure used for 1978-79 operating aid under present statutes.

d Income per Wealth TAPU (Income/WTAPU) uses 1970 Census Income and the same wealth TAPU as in present statutes for 1978-79 aid.

e Tier 1 Aid Ratios are based on the first tier operating aid ratio formula for 1978-79 aid:

$$1.000 - \left[\frac{\text{District Wealth per pupil}}{\text{State Average Wealth per pupil}} \times .51\right]$$

f Data for the City of Rensselaer in Rensselaer County and Pearl River in Rockland County have been excluded from this table because 1970 U.S. Census personal income data were not available for either district.

APPENDIX B: STATISTICAL TABLES

Text references to the tables in Appendix B are found in the fourth chapter, Potential Impact of The Use of New York State Taxable Income as a Criterion of School District Wealth.

All of the statistical data which are reported in this Appendix and which relate to 1978-79 current law formula factors are based on a district-by-district computer tape of March 20, 1978 supplied to the New York State Budget Division by the State Education Department. This tape was adjusted to reflect major data changes reported on State Education Department computer runs of April 11, 1978 and on May 11, 1978; the latter run provided data on New York City aid only.

All footnotes for tables in this Appendix appear at the bottom of the table or on the page immediately following the table.

APPENDIX TABLE B-1

COMPARISON OF NEW YORK STATE FULL VALUATION AND PERSONAL INCOME AS DEFINED BY DIFFERENT GOVERNMENTAL AGENCIES FOR 1969, 1974, 1975, AND 1976

	Full Valuation		Personal Income		
Area and Calendar Year	For School Aid Purposes[a]	For Other Purposes[b]	U.S. Bureau of the Census[c]	New York State Department of Taxation & Finance[d]	New York State Department of Commerce[e]
	-----------------------(dollar amounts in millions)				-------------------------------------
New York City					
1969	$ 49,027 (43.3)*	$ 48,711 (44.0)*	$29,198 (44.4)*	$25,430 (42.9)*	$ 38,021 (46.7)*
1974	71,329 (39.4)	70,996 (40.1)	36,952 (41.7)	30,876 (39.2)	48,944 (43.9)
1975	73,523 (38.1)	73,065 (38.8)	NA	30,957 (38.4)	50,673 (42.6)
1976	74,704 (36.7)	74,219 (37.3)	NA	31,901 (37.4)	NA
Rest of State					
1969	64,238 (56.7)	62,054 (56.0)	36,617 (55.6)	33,840 (57.1)	43,364 (53.3)
1974	109,496 (60.6)	105,968 (59.9)	51,672 (58.3)	47,948 (60.8)	62,596 (56.1)
1975	119,255 (61.9)	115,235 (61.2)	NA	49,669 (61.6)	68,280 (57.4)
1976	129,081 (63.3)	124,786 (62.7)	NA	53,309 (62.6)	NA
Total State					
1969	113,265 (100.0)	110,765 (100.0)	65,815 (100.0)	59,270 (100.0)	81,385 (100.0)
1974	180,825 (100.0)	176,965 (100.0)	88,624 (100.0)	78,824 (100.0)	111,540 (100.0)
1975	192,778 (100.0)	188,300 (100.0)	NA	80,626 (100.0)	118,953 (100.0)
1976	203,785 (100.0)	199,005 (100.0)	NA	85,210 (100.0)	126,925 (100.0)

*Numbers in parentheses denotes percent of total State

FOOTNOTES

TABLE B-1

a Full valuation, as calculated by the New York State Education Department, for use in school aid apportionment formulas. The assessment rolls used for this purpose differ, in some instances, from those for other purposes.

b Full valuation, as calculated by the New York State Board of Equalization and Assessment, for other general purposes.

c 1969 calendar year data were obtained in conjunction with the 1970 Census. The 1974 figures were obtained from Population Estimates and Projections, U.S. Bureau of the Census, May 1977. Data for 1975 and 1976 are not available (NA).

d As reported from New York State personal income tax returns and as defined by the New York State Tax Law. Only New York State residents' taxable income is shown.

e Based on statewide estimates of the Bureau of Economic Analysis of the U.S. Department of Commerce.

APPENDIX TABLE B-2

COMPARISON OF 1978-79 FORMULA OPERATING AID USING 1976 FULL VALUATION AND 1975 FULL VALUATION AS THE WEALTH MEASURE

Area	Percent of Total State Full Valuation 1976[a]	Percent of Total State Full Valuation 1975[b]	1978-79 Formula Operating Aid: 1976 Full Value Per Pupil (1976-77 Wealth TAPU)[c] (amounts in thousands)	1978-79 Formula Operating Aid: 1975 Full Value Per Pupil (1976-77 Wealth TAPU)[d] (amounts in thousands)	Percent Change from 1976 to 1975 Full Value Formula Aid
Big Five Cities	40.81%	42.34%	$ 801,222	$ 777,625	-2.95%
Buffalo	1.19	1.23	50,792	49,564	-2.42
Rochester	1.19	1.18	30,181	29,976	-0.68
Syracuse	0.65	0.66	21,213	20,777	-2.05
Yonkers	1.12	1.13	10,594	10,141	-4.14
New York City	36.66	38.14	688,442	667,167	-3.10
Rest of State	59.19%	57.66%	$1,794,621	$1,818,508	+1.33%
TOTAL STATE[e]	100.00%	100.00%	$2,595,843	$2,596,133	+0.01%

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[a] 1976 full valuation as calculated for public school aid purposes and used pursuant to current law for aid apportionment in the 1978-79 school year. The fourth column of the table shows the results of substituting 1975 full valuation for 1976 full valuation.

[b] 1975 full valuation as calculated for public school aid purposes and used under current law for aid apportionment in the 1977-78 school year.

[c] The wealth per pupil measure is based on 1976 full valuation and 1976-77 WTAPU. The total formula operating aid is that generated by the current operating aid formula for 1978-79.

[d] The wealth per pupil measure for this formula aid calculation is based on 1975 full valuation and 1976-77 Wealth Total Aidable Pupil Units (WTAPU). All other factors are the same as those for calculating aid under the current operating aid formula for 1978-79.

[e] Includes data for all 705 major school districts.

APPENDIX TABLE B-3

COMPARISON OF NEW YORK STATE FULL VALUATION AND PERSONAL INCOME FROM TWO SOURCES FOR THE 17 LARGEST COUNTIES, NEW YORK CITY, AND REST OF STATE

Area	1975 Full Valuation[a]		1975 New York State Taxable Income[b]		1970 Census Personal Income[c]	
	Amount	Percent	Amount	Percent	Amount	Percent
	(dollar amounts are in thousands)					
17 Largest Counties[d]	$93,089,873	49.43%	$40,350,983	50.05%	$30,236,275	45.94%
Albany	2,918,401	1.55	1,267,470	1.57	1,029,404	1.56
Broome	1,714,184	0.91	890,970	1.11	697,608	1.06
Chautauqua	1,264,288	0.67	505,532	0.63	410,834	0.62
Dutchess	2,416,256	1.28	1,077,773	1.34	735,796	1.12
Erie	8,854,097	4.70	4,480,244	5.57	3,588,781	5.45
Monroe	7,310,263	3.88	3,670,660	4.55	2,720,235	4.13
Nassau	20,120,982	10.69	8,904,975	11.09	6,635,524	10.08
Niagara	1,822,153	0.97	912,772	1.13	723,896	1.10
Oneida	1,626,200	0.86	901,933	1.12	803,099	1.22
Onondaga	3,876,141	2.06	1,954,999	2.42	1,601,019	2.43
Orange	2,997,395	1.59	965,096	1.20	674,946	1.03
Rensselaer	1,050,849	0.56	566,237	0.70	460,275	0.70
Rockland	3,890,302	2.07	1,322,735	1.64	859,837	1.31
Schenectady	1,501,929	0.80	719,238	0.89	568,122	0.86
Suffolk	16,501,253	8.76	5,815,545	7.21	3,775,551	5.74
Ulster	1,659,976	0.88	572,220	0.71	426,548	0.65
Westchester	13,565,204	7.20	5,822,584	7.22	4,524,800	6.88
New York City	$73,065,263	38.80%	$30,956,771	38.40%	$29,197,792	44.36%
Rest of State	$22,144,792	11.76%	$ 9,317,889	11.56%	$ 6,380,872	9.70%
TOTAL STATE	$188,299,928	100.00%	$80,625,643	100.00%	$65,814,939	100.00%

FOOTNOTES

TABLE B-3

a New York State Board of Equalization and Assessment, *State Equalization Table For The Year 1975*, September 1976. These county full valuation data are not the same as those used by the State Education Department for aid apportionment in the 1977-78 school year, because of the differences in the calculation method. Full valuation data as computed for school purposes are not available based on county geographical lines, because of the differences between school district and county boundaries.

b New York State Department of Taxation and Finance, *New York State Personal Income Tax: Number of Returns, Total Income, and Tax Liability, by County of Residence, Income Year 1975*, November 1976.

c United States Department of Commerce, Bureau of the Census, *Population Estimates and Projections: Current Population Reports* (Series P-25, No. 680), May 1977. Total personal income derived from estimated 1969 per capita income and 1970 Census population data.

d The 17 largest counties shown in this table include all counties (excluding the five boroughs of New York City) for which a 1970 census population of 140,000 or more was reported.

APPENDIX C: GEOGRAPHIC INFORMATION

This section presents information on the geographic location of the State's 62 counties, 44 Boards of Cooperative Educational Services (BOCES) and nine Standard Metropolitan Statistical Areas (SMSAs).

GEOGRAPHIC INFORMATION

Three types of geographic groupings are used in this study: counties, Boards of Cooperative Educational Services (BOCES), and Standard Metropolitan Statistical Areas (SMSAs) within New York State.

Counties

New York State has 62 counties. However, 5 of these counties are located within New York City. Further, only 17 of the remaining 57 counties outside New York City had a 1970 Census population of more than 140,000. The 40 smaller counties have only 593,000 (18 percent) of the pupil units for the apportionment of 1978-79 operating aid as Appendix Table A-6 indicates.

There is no fixed geographic relationship between school districts and counties. A large number of districts are located in two or more counties. Some districts have territory in as many as four counties. For purposes of reporting operating aid totals and related computational factors, school district data are summarized in the county in which the district's administrative offices are located.

BOCES Regions

Boards of Cooperative Educational Services (BOCES) were first authorized in New York State in 1948. They were established to supplement teaching services and to provide non-academic courses for pupils from school districts too small to provide such courses.

Currently, there are 44 BOCES serving 684 major school districts. Current law excludes the Big Five cities from participating in BOCES while 16 other districts have chosen not to become "member districts". For purposes of analysis, however, all of these districts have been placed in the BOCES in which they are geographically located, except in the case of New York City which is treated as a single district. By design BOCES regions were formed so that they are coterminous with the local school districts they serve.

BOCES regions bear the name of the counties that comprise them. Where a county has been subdivided into two or more BOCES districts, the districts will bear the county name followed by a number -- e.g., Suffolk 1.

The number of school districts per BOCES region ranges from 6 (Cortland-Madison) to 56 (Nassau) and the full value per wealth total aidable pupil unit from $180,955 (Suffolk 3) to $28,737 (Madison-Oneida).

A complete list of the 44 BOCES districts including wealth per pupil and aid ratios for each district using full valuation and income can be found in Appendix Table A-7 on pages 71-72 of this report.

Standard Metropolitan Statistical Areas (SMSAs)

As defined by the U.S. Bureau of the Census, a standard metropolitan statistical area (SMSA) is a county or group of contiguous counties which contains at least one city of 50,000 inhabitants or more, or "twin cities" with a combined population of at least 50,000. In addition, contiguous counties are included in an SMSA if, according to certain criteria, they are socially and economically integrated with the central city.

In New York State, there are nine SMSAs. They are as follows:

1. Albany-Schenectady-Troy (Albany, Montgomery, Rensselaer, Saratoga and Schenectady counties);
2. Binghamton (Broome and Tioga counties);
3. Buffalo (Erie and Niagara counties);
4. Elmira (Chemung county);
5. Poughkeepsie (Dutchess county);
6. Rochester (Monroe, Ontario, Orleans, Livingston and Wayne counties);
7. Syracuse (Madison, Onondaga and Oswego counties);
8. Utica-Rome (Herkimer and Oneida counties); and
9. New York City (Nassau, Suffolk, Westchester, Rockland and Putnam counties together with New York City itself).

All 31 counties in New York State which are not included in the nine SMSAs are classified as non-metropolitan areas. These counties include some smaller cities, suburban and rural districts.

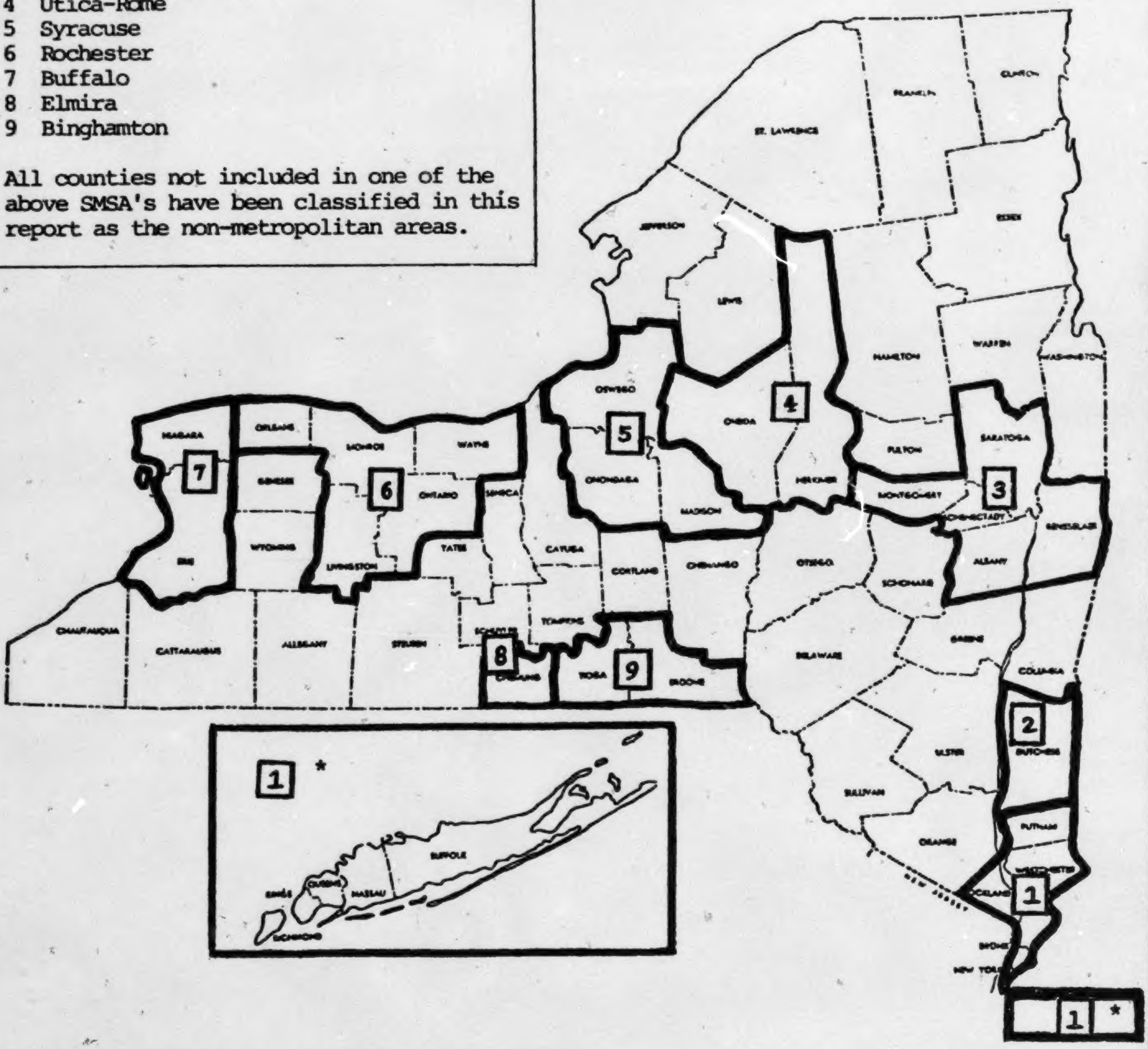
The map on the back cover shows the location of the nine SMSAs and of the counties in the non-metropolitan areas of the State.

New York State Map of Standard Metropolitan Statistical Areas

KEY

1 New York City
2 Poughkeepsie
3 Albany-Schenectady-Troy
4 Utica-Rome
5 Syracuse
6 Rochester
7 Buffalo
8 Elmira
9 Binghamton

All counties not included in one of the above SMSA's have been classified in this report as the non-metropolitan areas.



St. Lawrence
Franklin
Clinton
Jefferson
Essex
Lewis
Hamilton
Warren
Washington
Oswego
4
Oneida
Saratoga
Niagara
Orleans
Monroe
Wayne
5
7
6
Onondaga
Herkimer
Fulton
Montgomery
3
Genesee
Ontario
Seneca
Madison
Schenectady
Rensselaer
Wyoming
Livingston
Yates
Cayuga
Cortland
Chenango
Otsego
Albany
Erie
Schoharie
Chautauqua
Cattaraugus
Allegany
Steuben
Schuyler
Tompkins
Greene
8
Delaware
9
Chemung
Tioga
Broome
Columbia
2
Ulster
Dutchess
Sullivan
Putnam
Orange
Westchester
Rockland
New Jersey
1
Bronx
New York
1 *
1 *
Suffolk
Queens
Kings
Nassau
Richmond

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